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Economics Editors
Christian J. Foster
William M. Liefert
202-219-0620

Data/Graphics Coordinators
Jaclyn Y. Shend
Jay K. Mitchell

Authors
Christian J. Foster
Roger L. Hoskin
Peter S. Liapis
William M. Liefert
Yuri Markish
Jay K. Mitchell
David J. Sedik
Sharon S. Sheffield
Jaclyn Y. Shend

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Cover Photo
Christian J. Foster

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Situation and Outlook Series

Contents

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Preface

The term "former Soviet Union (FSU)" used throughout this report refers to the sum of 15 individual countries--the 12 newly independent countries of the former USSR (Russian Federation, Ukraine, Belarus, Uzbekistan, Kazakhstan, Georgia, Azerbaijan, Moldova, Kyrgyzstan, Tajikistan, Armenia, Turkmenistan) and the 3 Baltic countries (Estonia, Latvia, and Lithuania). The Commonwealth of Independent States (CIS) is comprised of the FSU countries minus the Baltics. The term "intra-FSU trade" used in this report refers to trade among the 15 countries identified above. Extra-FSU trade refers to trade between the FSU nations and countries not included in the FSU region.

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Russian Ruble/Dollar Average Monthly Exchange Rate

	1990	1991	1992	1993	1994	1995
January	10.27	25.26	197.50	495.42	1,451.64	3,859.42
February	12.32	34.32	186.00	569.00	1,575.82	4,225.80
March	13.52	36.08	152.26	664.56	1,741.20	4,748.68
April	15.91	35.19	153.56	767.22	1,791.55	
May	20.59	38.10	121.72	928.25	1,882.28	
June	24.17	40.55	125.99	1,080.00	1,958.15	
July	24.17	52.40	143.37	1,024.55	2,025.71	
August	23.47	51.98	168.16	985.84	2,121.74	
September	22.29	55.05	223.92	1,068.64	2,342.27	
October	22.29	63.70	359.38	1,187.14	3,046.52	
November	20.18	107.20	426.38	1,194.45	3,151.43	
December	22.88	169.73	414.50	1,240.42	3,345.53	
Annual average	**19.34**	**59.13**	**222.73**	**933.79**	**2,202.82**	

Averages based on results of foreign exchange auctions held by Vneshekonombank and Moscow Interbank Currency Exchange auctions organized under the auspices of Gosbank.
Sources: *Kommersant; Ekonomika i zhizn';* International Monetary Fund Economic Review.

Summary

Russian Economic Reforms Raising Imports of High-Value Products

During the past 4 years, the countries of the former Soviet Union (FSU) have made only limited progress toward institutional reform of their agricultural systems. The main development has been the erosion of the State procurement system, so that a growing share of agricultural output is being sold through newly developed (though still rudimentary) private markets. However, reform has been lagging concerning privatization of farms, the establishment of working land markets, and creation of supporting market infrastructure, such as systems of commercial law and banking and finance.

On the other hand, most FSU countries are undergoing major "economic restructuring" involving the flow and use of real resources and goods in the agricultural sector, as indicated by changes in the quantity and mix of agricultural production, consumption, and trade. The Baltic States and Russia continue to be the most reformist FSU countries (both in agriculture and economywide), though in late 1994 Ukraine also started a serious reform program.

Agriculture is being economically restructured mainly because consumers' desires have largely replaced planners' dictates in determining what goods are produced and consumed. Price liberalization and the severe decrease in subsidies are forcing farms and food processing enterprises to become more self-financing and consumer-oriented. Although the restructuring of production involves some short-run disruption and hardship in the countryside, it can be viewed as an inevitable part of the transition from a planned to a market economy.

The restructuring has affected the livestock sector more than crops. While crop production has declined since reforms began in 1992, weather-related problems and the removal of marginal lands from production account for much of the drop in output. Although input use has plummeted, the drop has not yet strongly hurt grain yields. However, continued low use of certain inputs, such as fertilizers and pesticides, should have an increasingly negative effect on yields. Nevertheless, the fact that input use has fallen proportionally much more than yields suggests that farms are responding to the growing scarcity of inputs by using them more productively.

Reforms have radically transformed the livestock sector. In most FSU countries, livestock inventories and output have already fallen 20 to 30 percent since reforms began. Although animal holdings in the private sector have risen, they have been more than offset by dramatic declines on former State and collective farms. Without large subsidies to producers and consumers, consumer demand cannot support the artificially high levels of livestock production and consumption achieved in the Soviet period. Consumers are adjusting partly by switching from livestock products to less expensive bread and potatoes. In Russia, per capita meat consumption in 1994 was down about 15 percent from 1991, while consumption of bread and potatoes rose around 5 and 10 percent, respectively. The livestock contraction could bottom out in the next few years as consumers' real incomes begin to rise with the onset of economic growth, increasing demand for livestock products.

Economic reforms and the resulting restructuring of agriculture, particularly of the livestock sector, have significantly affected FSU trade. Most notably, FSU imports of bulk commodities (grain and oilseeds) have plunged, while those of high-value products (HVP's) have surged. FSU grain imports have fallen mainly because of reduced demand stemming from the dramatic downsizing of the livestock sector and decreased waste, as well as financial constraints.

Total 1995/96 FSU grain imports (intra- and extra-FSU) are projected at 11 million tons, about 75 percent below those of the late 1980's. Russian and Uzbek grain imports are forecast at around 3 million tons each, and Belarus, which annually imported 3-4 million tons of grain in the late-1980's, is projected to import just under 1 million tons. In 1995/96, Kazakhstan is forecast to be a net exporter (primarily to Central Asia and Russia) of nearly 6 million tons of grain, and Ukraine a net exporter of around a half million tons. U.S. grain exports to the FSU region, which annually averaged 14 million tons during fiscal 1986-90, totaled just under 5 million tons in fiscal 1994, and less than 300,000 tons for the first 5 months of fiscal 1995.

Although FSU bulk commodity imports have fallen, Russia's HVP imports have spiraled upward. The main causes are reform-induced growth of an upper income class (as income distribution becomes more inequitable), real appreciation of the ruble against the dollar, and expanding private trade geared toward meeting consumer preferences. U.S. sales of HVP's to Russia in fiscal 1994, for example, rose 2.5 times from fiscal 1993 to nearly $700 million, making Russia a top market for U.S. poultry and snack foods.

FSU agricultural trade policy is becoming more producer protectionist, as controls on exports decrease while controls on imports increase. This reflects a change in government policy from defending the interests mainly of consumers to defending producers. Further domestic market-oriented reforms should strengthen this change in FSU trade policy.

Restructuring of Agriculture Continues in Russia, May Spread to Ukraine

Over the past 3 years, those FSU countries that have implemented comprehensive reforms in fiscal, monetary, foreign trade, and price policies have experienced substantial restructuring of agricultural production, consumption, and trade. In Russia, reforms have significantly reduced bulk State food imports and raised high-value private food imports. As other countries of the region implement fiscal, monetary, agricultural, and foreign trade reforms along the lines of Russia and the Baltic States, similar effects should follow. [David J. Sedik]

Over the past 3 years, economic reform has significantly changed food production, consumption, and import demand in the FSU countries, particularly in those where comprehensive reforms have progressed furthest. In these nations, livestock inventories have fallen further, leading to larger drops in feed grain demand. For instance, in **Russia,** livestock inventories fell 21 percent since the end of 1991, while grain use for feed declined over 30 percent. The decline in feed demand was in large part responsible for the fall in extra-FSU grain imports from an average of 20-30 million tons per year in the 1980's, to about 3 million tons in 1994/95.

Russian food imports have changed over the past 3 years. The concomitant liberalization of foreign trade, real appreciation of the ruble, and rising average real incomes in Russia have led to the transformation of the country's food imports from bulk commodities purchased by the State to processed food products purchased by private importers. For example, Russia is now the number one importer of U.S. poultry parts and one of the world's largest markets for U.S. snack foods.

The fall in bulk State imports and the rise in processed private imports are key results of reform that shape the outlook for the other countries of the region. While policy reform is not the sole determinant of the ability of these countries to import--some of them are obviously rather poor--the results cited here illustrate that when FSU governments implement fundamental reforms in fiscal, monetary, and trade policies, the agricultural and food sectors of those economies undergo substantial changes that alter agricultural trade. On the other hand, in those FSU countries that have not implemented such reforms, livestock inventories have not shrunken as much, such that feed demand has not dropped as far. Moreover, less reformed countries have neither a sizable private sector nor the relatively strong currency needed to import more processed foods, both of which come from macroeconomic stabilization.

Russian Reforms and Their Results

The reforms that have so changed **Russian** agriculture over the past 3 years did not originate in agriculture. The primary reforms leading to changes in livestock inventories and trade were retail price liberalization, the tightening of fiscal and monetary policies, and the liberalization of foreign trade in 1992 through 1994. Together, these reforms created conditions that put great pressure on agricultural (and other) producers to cut unprofitable production and compete with imported foodstuffs.

Price liberalization and the tightening of fiscal and monetary policies had 3 major effects that substantially altered the economic environment for agriculture. Price liberalization forced agricultural producers and processors to adapt themselves to consumer demand. More stringent fiscal and monetary policies created payment problems for federal procurement organizations, such that producers nearly ceased procurement deliveries to *federal* (but not *regional*) organizations in **Russia**. Tighter fiscal and monetary policies reduced subsidies and soft credits to producers.

The opening of the **Russian** economy to private foreign trade allowed a nearly 200-percent increase in high-value agricultural imports to enter Russia from the United States since 1992. A primary reason for this growth is that in the past 3 years imported food (and other goods) has actually become more affordable for Russians. The dollar value of the average monthly salary in Russia increased from $7 to over $100 between January 1992 and December 1994, because Russian nominal wages rose faster than the ruble depreciated against the dollar. This real appreciation of the ruble was due primarily to the gradual stabilization of the economy since 1992.

These initial policy changes by the government exposed **Russian** agriculture to market forces and consumer preferences, forcing changes on producers that no amount of administrative decrees could have done. As Russian producers lost markets to imported foods, some improved quality and packaging to better compete with imports. Others continued to lobby for government handouts, which became less plentiful with the tightening of fiscal and monetary policies. The end result for the Russian consumer was better quality food, much of it imported. Moreover, competitive forces motivated a shift toward private production and marketing of food.

Government Agricultural Policies in 1994 and Outlook for 1995-96

Despite Efforts To Protect Producers, Russian Fiscal and Monetary Tightening Drives Further Restructuring

After the initial fundamental government policy changes outlined above, the **Russian** government tried to protect producers from the production declines that have resulted from

Fall in Real GDP Bottoming Out

GDP and industrial output in the FSU countries should continue to fall in 1995, but by smaller percentages than in 1994 (table 1). Output has been dropping mainly because in the Soviet system, planners' rather than consumers' desires determined output. The restructuring of production to satisfy consumers' rather than planners' preferences cannot happen immediately; at the beginning of the transition while resources are being reallocated to new uses, total output inevitably will fall. Yet, this short-term, reform-induced drop in production should soon begin to bottom out. Official FSU macroeconomic data also overstate the decline in real output. The figures fail to record much of new private enterprise. Also, enterprises have strong incentive to understate their output to reduce taxes. Thus, in 1995 real GDP (meaning without measurement error) in **Russia** is projected to fall by 5-10 percent, and in **Ukraine**, **Belarus**, and **Kazakhstan** by 10-15 percent.

If economic reform in **Russia** continues, the economy's contraction could stop within a few years. By 1997-98, GDP, as well as industrial and agricultural production, might begin to rise. By 2000, annual GDP growth could be as high as 5 percent. Consumer incomes and purchasing power would correspondingly rise, increasing demand for foodstuffs (particularly those with high income elasticity of demand, such as livestock products and fruit).

Inflation rates in most FSU countries should decrease further in 1995, after substantial decline in 1994. If the governments of **Russia** and **Ukraine** strictly adhere to their agreements with the IMF concerning fiscal and monetary policy, 1995 inflation should be less than half the 1994 levels. A major test of financial discipline in both countries will be whether the government can resist appeals from the agriculture sector in late summer for funds to help bring in the harvest. Although official unemployment rates in FSU countries remain low, real unemployment, and even more so underemployment of workers on the job, are much higher. In at least the short run, accelerated reform would turn much of the underemployment into open unemployment.

The official data indicate that in **Russia** in 1993-94, per capita real income rose by a 2-year total of 5 to 10 percent. (Average real income rises if the percentage growth in nominal incomes exceeds the percentage increase in consumer prices, that is, inflation.) The importance of rising real income for the agriculture and food economy is that if consumers are on average richer, their demand for foodstuffs, particularly those with higher income elasticity of demand (such as livestock products), should increase.

Yet, one might wonder how real income in **Russia** could be rising while total output (GDP) has been falling. One part of the explanation is that, although both official income and output data do not capture all of Russia's new and fast-growing private economic activity, the output figures exclude more. Another point concerns the interplay between payment delays for workers, inflation, and the conventions used for computing real income. Many enterprises and farms have been late in paying workers, often by 2-4 months, while monthly inflation in Russia in 1993 and 1994 averaged 21 and 10 percent, respectively. The convention for computing real income does not take into account the decrease in the real value of wages earned caused by late payment combined with inflation. Payment arrears in an inflationary economy reduce the real purchasing power of workers' pay. Nonetheless, given that the official income data do not cover all income earned, the rise in conventionally computed "real income" indicates that in the past 2 years, Russian incomes that reflect consumers' real purchasing power did increase.

[William M. Liefert]

Table 1--Economic indicators, selected FSU countries, 1991-94

Item	1991	1992	1993	1994
	Percent change			
Russian Federation				
GDP	-12.9	-19.0	-12.0	-15.0
Industrial production	-8.0	-18.0	-14.1	-20.9
Agricultural production	-4.5	-9.0	-4.0	-9.0
Consumer prices	92.6	2,564	879	226
Ukraine				
GDP	-10.0	-13.7	-14.2	-19.0
Industrial production	-4.8	-6.0	-8.0	-27.7
Agricultural production	-13.2	-8.0	2.0	-17.0
Consumer prices	83.5	2,000 [1]	10,160 [1]	400 [1]
Belarus				
GDP	-1.2	-9.6	-9.5	-20.0
Industrial production	-1.0	-9.4	-7.4	-19.3
Agricultural production	-4.9	-9.0	4.0	-14.0
Consumer prices	94.1	970	1,190	2,220
Kazakhstan				
GDP	-11.8	-13.0	-12.9	-25.0
Industrial production	-0.9	-13.8	-14.8	-28.5
Agricultural production	-10.4	1.0	-5.0	-17.0
Consumer prices	90.9	1,510	1,660	1,880

[1] December 1 to December 1.
Source: Statkom SNG; Goskomstat Rossii.

falling demand for most livestock products and competition from imported food products, but with little success.

In 1994, **Russian** government efforts at supporting agriculture centered on three policies. First, the government continued to subsidize agriculture through direct budget grants, tax breaks, a federal agricultural machinery leasing program, and soft credits. Then, following past patterns, agricultural loans extended in 1993 and 1994 were effectively written off by making them due over 10 years at an annual interest rate of 10 percent. Second, the government attempted to support agricultural commodity prices by issuing "recommended prices" for agricultural products purchased for the federal and local procurement funds. These prices were substantially above both market prices and the ability of procurement organizations to pay, and they therefore inflated expectations among producers. When it became clear that procurement organizations had funds to purchase at only market or below-market prices and often did not pay on time, producers nearly stopped deliveries to federal procurement organizations. Third, the government imposed moderate tariffs on imports of agricultural inputs and food products on July 1, 1994, a reaction to the sharp increase in imported food in Russia in 1993 and 1994.

Government efforts to support agriculture will probably continue to have little effect, and restructuring will most likely continue in 1995 and 1996. This is because the **Russian** government appears to recognize that improvement for the **Russian** economy (including agriculture) depends mainly on economic growth, that growth requires reducing inflation further, and that this requires further fiscal and monetary tightening. The government targets for fiscal and monetary policy announced in consultation with the International Monetary Fund (IMF), including a 1-percent monthly rate of inflation in the second half of 1995, illustrate the **Russian** government's intention to continue tightening fiscal and monetary policies.

In 1995, direct budget subsidies to agriculture will continue to decline as in the past few years. According to the 1995 budget, the agricultural sector should receive 13.3 trillion rubles ($2.7 billion) in direct federal budget subsidies (most aimed at inputs for livestock producers), about 2 percent of projected GDP. This is a drop from 1992 and 1993, when agricultural subsidies accounted for about 19 and 5 percent of GDP, respectively. In addition, producers will most likely receive centralized (subsidized) credits and subsidies from off-budget accounts.

To stem falling federal procurements, for the 1995 harvest the **Russian** Ministry of Agriculture and Food has created an entirely new bureaucratic organ, the Federal Food Corporation (FFC). The FFC is a State corporation within the Ministry of Agriculture that is supposed to procure agricultural commodities for federal purposes at State-set support prices, import agricultural commodities, and intervene in commodity markets. It reportedly will take over many of the functions formerly performed by Roskhleboprodukt, Exportkhleb, and other State procurement and import organizations. The FFC has already published its recommended prices for federal purchases for the first quarter of 1995. The prices are to be adjusted quarterly. The recommended prices for wheat are quite close to domestic market prices, although those for some of the other commodities (including rye) are much higher than domestic market prices.

A change in bureaucracies, however, does not change the financial situation that any federal procurement organization faces, and it is not expected to reverse the decline in procurements for federal reserves. The FFC is still subject to funding constraints (regardless of what "guaranteed prices" it may publish) set by the Ministry of Finance and the **Russian** Central Bank. It must also compete with private commodity purchasers who pay cash.

In 1995-96, financial pressures in agriculture will probably continue to force the privatization of agricultural assets, production, and marketing (table 2). This continues trends of the past few years, which accelerated in 1994. Table 3 shows the increases in the percentage of production in the private sector by commodity over the past 3 years. Figure 1 shows the gradual privatization of agricultural marketing that has occurred over the past 3 years because of falling State procurements. The difference in marketing channels for crops is significant because State procurements were funded either by budget outlays or nonmarket credits. The figures for livestock procurement are misleading, however, since slaughterhouses are not funded by budget outlays and are under considerable competitive pressure. In other words, while the distinction between State and private marketing channels has been significant for crops, it has not been for livestock products.

New President Seeks Real Reform for Ukraine, Which Would Lead to Substantial Agricultural Restructuring

Reform hardly got off the ground in **Ukraine** until the summer of 1994 with the election of the Kuchma government. However, since the fall of 1994 the Kuchma reforms, at least on paper, have turned out to be very similar to those that have already taken place in Russia. Monetary policy was tightened throughout 1994, and at the end of October most retail prices were liberalized. Annual inflation fell from over 3,000 percent in 1993 to 500 percent in 1994. The Kuchma reforms of 1994 also included limited foreign trade liberalization, which is to be extended in 1995.

State procurement of agricultural commodities is supposed to be reduced slightly for the 1995 harvest, and half of State grain procurements are intended to be purchased through commodity markets. Legislation for the privatization of storage and transportation facilities, food processors, and agricultural service enterprises, as well as for voucher privatization of State farms, is either being developed or discussed. Changes in **Ukrainian** agriculture remain more a promise than reality, however, since the legislation, announced in the spring of 1995, must still be implemented.

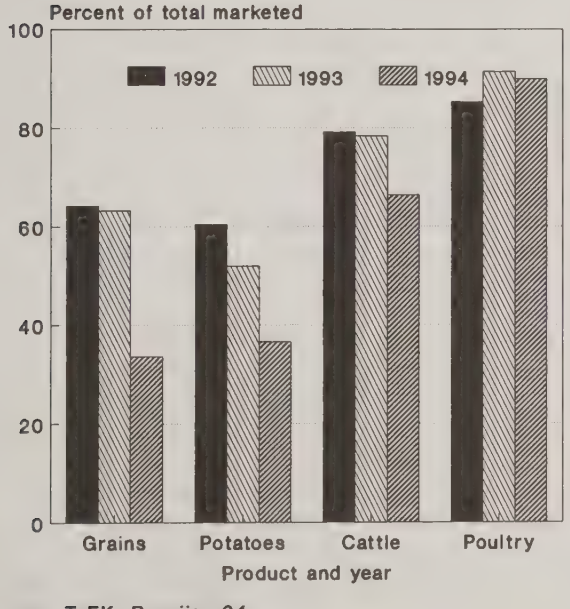
If the above reforms are implemented, **Ukraine** should undergo many of the same changes that have altered Russian agriculture over the past 3 years. Tightened fiscal and monetary policies should eventually eliminate federal procurements of agricultural commodities and sharply curtail subsidies and soft credits to agriculture. Liberalized foreign trade should expose Ukrainian food producers to competition from im-

Table 2--Private farms in FSU agriculture

Country	Number of private farms on January 1			Average area of private farms on January 1			January 1, 1994, area as a portion of:	
	1993	1994	1995 [5]	1993	1994	1995 [5]	Agric. land in enterprises	Plowlands in enterprises
				--------Hectares------			*Percent*	
Azerbaijan	0.2	0.4	0.8	39 [6]	28	25	0.2	0.3
Armenia [1]	246.0	299.9	305.0 [3]	2 [7]	1	1	4.4	23.1
Belarus	2.4	2.7	2.9	16 [6]	20	21	0.5	0.6
Kazakhstan	9.3	16.3	21.0	376 [6]	404	346	3.2	3.6
Kyrgyzstan [1]	8.6	18.3	21.7	44	67	29	7.7	12.1
Moldova	0.5	3.1	12.7	3	2	3	0.2	0.2
Russian Federation	182.9	270.0	285.6	43	42	41	1.7	5.4
Tajikistan	0.0	0.1 [2]	0.2	25 [6]	14 [2]	131	0.0	0.0
Turkmenistan	0.1	0.3	0.3 [4]	11	8	8 [4]	0.0	0.0
Uzbekistan	5.9	7.5	12.8	8	9	14	0.2	0.3
Ukraine	14.7	27.7	31.3	20	20	22	1.2	1.4
Total	470.6	637.0	694.3	na	na	na	na	na

na = Not available.
[1] Includes farmer cooperatives; [2] Apr. 1, 1994; [3] Jul. 1, 1994; [4] Jan. 1, 1994; [5] Oct. 1, 1994; [6] Oct. 1, 1992; [7] Dec. 1, 1992.
Source: Statkom SNG.

Figure 1
State and Cooperative Marketing, Russian Federation



Source: TsEK, *Rossiia--94: Ekonomicheskaia kon'iunktura*; *Rossiia--95: Ek. kon.*

ported food, an effect which will be exacerbated by the appreciation of the karbovanets, as inflation and fiscal policies are reined in. Ukrainian farms should then continue to face falling demand for livestock products, thereby reducing grain demand, and causing Ukraine to become a net exporter of grain before the end of this century. Rising real incomes in Ukraine will then increase demand for more processed food imports.

Kazakh Reforms Lag

In contrast, reform in **Kazakhstan** continues to be piecemeal and within the context of a State-owned, partially reformed economy, rather than part of a more comprehensive systemic reform effort as in **Russia** and as is proposed in **Ukraine**. Inflation remained over 1,000 percent for 1994. Prices have been only partially liberalized, soft credits and subsidies for agriculture remain, registration or licenses are required to export grain, and the State procurement system still dominates grain markets. Still, there are elements of liberalization in the agricultural sector. Bread prices were liberalized in October 1994, and in 1995 grain is supposed to be marketed through commodity exchanges and auctions.

Table 3--Private agricultural production and livestock herds as share of total, Russian Federation, 1990-94 [1]

Item	1990	1991	1992	1993	1994
	Percent of production				
Gross agricultural output	24	28	34	38	38
Of which:					
Crops	18	23	31	na	na
Livestock	28	30	36	na	na
Meat (total)	25	31	36	40	44
Beef	na	18	23	27	na
Pork	na	43	51	57	na
Poultry	na	33	34	33	na
Mutton & goatmeat	na	50	56	60	na
Milk	24	26	32	36	40
Eggs	22	22	26	27	29
Wool	25	29	33	37	42
Grain	0	0	2	5	6
Sugarbeets	0	0	2	4	4
Sunflowerseed	0	0	6	10	11
Potatoes	66	73	79	80	89
Vegetables	30	47	56	65	68
Fruits, berries	51	65	69	69	na
Grapes	na	13	13	na	na
Honey	na	na	76	na	na
	Percent of inventories (end of year)				
Cattle	17	20	23	26	29
Hogs	19	22	25	29	33
Sheep and goats	28	31	36	42	49

na = Not available.
[1] Private sector includes private plots and farms.
Source: Goskomstat Rossii.

Kazakhstan and most of the other non-Baltic FSU countries have instituted piecemeal reform, including some in agriculture, but they have not yet stabilized their economies enough to cause the changes in livestock inventories and trade that has happened in **Russia**. If reform does not accelerate, the pattern of food imports for these countries will probably not change significantly, except due to foreign exchange constraints.

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Demand for Inputs Continues To Decline; Agricultural Terms of Trade in Russia Moving Toward Western Levels

Demand for manufactured agricultural inputs in the FSU countries continued to decline in 1994 as farmers responded to market conditions. Input supply industries continue to downsize, but prospects for a rebound in 1995 are improving. In Russia, agricultural terms of trade significantly worsened in 1994, but, by some measures, they compare favorably with those faced by farmers in the United States or the European Union. [Peter S. Liapis and Yuri Markish]

Demand for fertilizers, machinery, and pesticides in the FSU countries fell again in 1994 because of a combination of reduced area planted and input prices that continued to increase toward world levels. In **Russia,** demand for fertilizer fell 62 percent, in **Kazakhstan**, the drop was 60 percent, while in **Ukraine**, fertilizer demand dropped by 35 percent (table 4). Only **Belarus**, among the FSU countries, experienced an increase in demand for fertilizer. Declining input use and bad weather reduced average yields and crop production across the FSU countries.

In addition to falling area planted, other indicators of input demand--farm receipts and debt--remain negative. Farm receipts in 1994 continued to decline in real terms. The value of agricultural output is estimated to be 9 percent below 1993.

Farmers, despite the apparent hard times, are rationally responding to changing economic forces by reducing input use and reducing costs. Hence, even though receipts fell in 1994, real costs also fell. Production expenditures for 1994, measured in 1993 rubles, were 34 percent below 1993 levels.

A frequently heard comment is that the "crisis" in the agricultural sector is due to the relative disparity of input and output prices. Critics of market reforms claim that markets are not working because the terms of trade are declining for agriculture, and the government should intervene to alter this.

There are several different indicators of agricultural terms of trade. One is the ratio of output to input prices or price indexes. A falling ratio generally indicates that agricultural terms of trade are worsening. However, this ratio measures relative price movements from a specific point in time, and it assumes that prices reflect a society's opportunity costs. But, relative prices in a particular period of time may be far from ideal for long- term economic efficiency. Also, this measure fails to capture possible improvements in quality or decreases in input use.

Nevertheless, the ratio is used by some to indicate the relative well-being of agricultural producers. In **Russia**, this ratio has dropped dramatically, especially in the last 2 years. Although both output and input prices have risen, input prices have increased much more. Thus, the ratio of the output price index to the input price index dropped from 0.93 in 1990 to 0.17 in 1994 (1986 = 1). A worsening terms of trade in agriculture is not unusual for reforming economies as subsidies are reduced and other distortions eliminated. Poland also experienced a decline in agricultural terms of trade when it started restructuring. In 1989, its index stood at 1.17, while in 1993 the index was at about 0.5 (1985 = 1).

Declining agricultural terms of trade are not unique to countries in transition. Farmers in the United States and the European Union have also experienced a decline in the terms of trade. However, the decline in the West generally reflects a long, slow erosion in the terms of trade. This suggests that relative prices might fluctuate less in the future, and farmers in **Russia** and other transition economies might not experience such sharp changes in their terms of trade, once policy and market environments stabilize.

Another indicator of terms of trade is the purchasing power of outputs relative to specific inputs. This measure also indicates that the terms of trade are deteriorating for **Russian** farmers. Official Russian statistics are inconsistent regarding the absolute amount of purchasing power. However, they consistently indicate that purchasing power of agricultural producers has declined. For example, one source indicates that in 1992 to purchase a *Niva* combine required 41.5 tons of grain while in 1994 146 tons of grain were necessary, and the cost to purchase the larger *Don-1500* combine, jumped from 103 to 271 tons of grain. Similarly, the cost of a ton of nitrogen fertilizer rose from about 0.3 ton of wheat in 1992 to a little more than 1 ton in 1994. Livestock producers also saw their purchasing power deteriorate. The cost of purchasing a ton of mixed feed increased from 0.24 to 0.44 ton of beef or from 0.17 to 0.25 ton of pork in 1994.

Comparing the purchasing power of agricultural producers in different countries can be misleading because of data problems and differences in the quality of both inputs and outputs. The following comparisons should therefore be made with caution. For example, in 1994 in the United States, 973 tons of wheat were required to purchase a large capacity combine similar to the *Don-1500*. Similarly, in 1992, 1.5 tons of wheat were required to buy a ton of ammonium nitrate in the United States, and 2.95 tons of wheat were required in the United Kingdom. These data suggest that the purchasing power of Russian agricultural output is higher than that in the West. However, one cannot conclude that simply because Russian producers need fewer tons of grain to purchase a ton of fertilizer or a combine, they are relatively better off. The

Table 4--Availability and use of mineral fertilizers, selected FSU countries [1]

Country/ year	Production				Deliveries				Application rate			
	Total [2]	Nitrogen	Phosphate	Potash	Total [2]	Nitrogen	Phosphate	Potash	Total [2]	Nitrogen	Phosphate	Potash
	1,000 tons								*Kilograms per hectare*			
FSU												
1961–65 avg.	5,143	1,996	1,776	1,748	4,500	1,618	1,612	1,260	20.4	7.3	7.3	5.7
1966–70 avg.	10,371	4,210	2,985	3,177	8,449	3,520	2,694	2,228	38.3	16.0	12.3	10.1
1971–75 avg.	17,876	7,248	4,483	6,138	13,802	6,209	3,882	3,703	62.2	28.0	17.5	16.7
1976–80 avg.	23,328	9,283	6,128	7,910	18,064	7,632	5,287	5,137	80.9	34.2	23.7	23.0
1981–85 avg.	29,294	12,573	7,520	9,193	22,156	9,790	6,540	5,817	98.8	43.7	29.2	26.0
1986–90 avg.	34,827	14,860	9,644	10,320	25,449	10,701	8,293	6,447	113.9	47.9	37.1	28.9
1990	31,700	13,200	9,500	9,000	21,639	8,738	7,815	5,081	97.5	39.4	35.2	22.9
1991	30,100	12,100	9,200	8,800	20,000	7,700	7,500	4,800	94.6	38.2	34.2	22.2
1992	22,350	9,050	7,300	6,000	10,000	3,900	3,800	2,300	50.0	20.2	18.1	11.7
1993	17,700	7,200	5,800	4,700	7,900	3,100	3,000	1,800	32.0	13.0	11.5	7.5
1994	14,700	6,000	4,800	3,900	6,500	2,450	2,350	1,700	15.0	6.1	5.4	3.5
Russian Federation												
1981–85 avg.	14,605	6,836	3,579	4,188	10,943	4,533	3,524	2,882	82.8	34.3	26.7	21.8
1986–90 avg.	17,744	8,137	4,938	4,667	12,976	5,293	4,592	3,088	98.9	40.3	35.0	23.5
1990	15,979	7,186	4,943	3,848	10,828	4,217	4,335	2,275	83.4	32.5	33.4	17.5
1991	15,042	6,880	4,275	4,086	10,102	3,967	3,761	2,374	79.7	31.6	29.1	19.0
1992	12,300	5,815	3,015	3,470	5.510	2.622	1.540	1,348	44.2	21.0	12.4	10.8
1993	9,917	4,800	2,517	2,600	3,721	2,083	907	731	32.0	18.0	7.8	6.2
1994	7,508	3,880	1,660	1,968	1,398	1,000	298	100	12.0	8.5	2.2	1.3
Ukraine												
1981–85 avg.	4,788	2,966	1,523	291	4,426	2,079	1,104	1,240	134.1	63.0	35.5	37.6
1986–90 avg.	5,340	3,420	1,680	220	4,837	2,110	1,369	1,356	148.9	64.9	42.0	41.9
1990	4,815	3,024	1,648	143	4,263	1,807	1,452	1,002	136.4	57.5	45.7	33.2
1991	4,238	2,819	1,282	137	3,843	1,662	1,088	1,091	123.0	53.0	34.0	36.0
1992	3,261	2,544	592	125	1,540	665	435	440	37.0	16.2	10.0	10.8
1993	2,492	2,067	325	100	1,000	520	280	200	24.0	12.0	7.0	5.0
1994	2,337	1,957	280	100	650	400	180	70	16.0	8.0	4.7	3.3
Kazakhstan												
1981–85 avg.	1.429	404	1,017	8	822	355	434	33	23.1	10.0	12.2	0.9
1986–90 avg.	1,644	439	1,194	11	957	369	561	28	26.8	10.3	15.7	0.8
1990	1,656	431	1,211	14	589	237	342	10	16.6	6.7	9.6	0.3
1991	1,516	410	1,094	12	531	235	285	11	14.9	6.6	8.0	0.3
1992	880	239	633	8	450	200	242	8	11.9	5.6	6.0	0.3
1993	304	84	215	5	226	100	121	5	8.0	3.6	4.1	0.3
1994	100	29	70	1	90	42	45	3	5.4	2.4	2.7	0.3
Belarus												
1981–85 avg.	5,530	545	228	4,757	1,722	630	332	760	296	108	57	131
1986–90 avg.	6,380	762	234	5,384	2,098	734	448	916	366	128	78	160
1990	5,996	745	256	4,995	2,152	682	484	986	378	120	85	173
1991	5,200	648	220	4,332	1,940	675	410	855	264	84	60	120
1992	4,000	500	170	3,330	1,500	520	315	665	185	59	42	84
1993	2,500	310	105	2,085	930	320	195	415	92	29	21	42
1994	3,000	370	125	2,505	1,100	375	215	510	46	14	10	22

[1] 100–percent nutrient weight–basis (1991–94 for Belarus and 1992–94 for the FSU, Kazakhstan, and Ukraine nutrient content of total, deliveries and application rates are estimated. Since 1992, data for deliveries are actually agricultural sales).
[2] Totals include trace elements.
Sources: Goskomstat SSSR; Goskomstat Rossii; Minstat Ukrainy; Goskomstat Kazakhstana; Statkom SNG.

productivity of the inputs must be taken into account. Farmers can pay more for inputs that are more productive.

How are the agricultural terms of trade changing over time for various countries? The ratio of fertilizer to wheat price has been declining in the United States and the United Kingdom. In the United States, 1.6 tons of wheat were required to purchase a ton of ammonium nitrate in 1990 while in 1993 only 1.47 tons of wheat were necessary. By the same token, 3.15 tons of wheat were needed to purchase a ton of ammonium nitrate in the United Kingdom in 1988, while in 1992 only 2.95 tons were needed. However, in **Russia**, the terms of trade have moved in the opposite direction as more and more grain is needed to purchase inputs. Yet, fertilizer prices in the United States jumped markedly during late 1994 and into 1995 possibly reversing the downward trend in the terms of trade for U.S. producers. Nevertheless, the data suggest that as Russian and other producers in the FSU countries become more integrated into the world market, their terms of trade will change and move closer toward the levels experienced by Western producers.

Agriculture supporters in the Russian government point to the sector's deteriorating terms of trade and falling input use to justify the need for subsidies. They claim that producers in the European Union and the United States are not being squeezed to the same extent. Although data indicate that input prices, especially in 1993 and 1994, increased faster than output prices, some figures suggest that the problems in the farm sector may not be as severe as the rising input prices might indicate. Although many enterprises are having difficulties, farm receipts for 1994, measured in 1993 rubles, were significantly greater than expenditures on purchased inputs. Changing relative prices have motivated farms to adjust their mix of inputs and outputs and, in particular, economize on inputs. Input productivity, therefore, is rising.

Prospects for the input production sector and input demand for 1995 and beyond will depend on developments in the general economy and government programs. The Russian government is trying to artificially increase input demand by providing direct or indirect subsidies through soft loans. Indications are that farm machinery production stabilized in the last quarter of 1994 and increased in the first quarter of 1995 (compared with the first quarter of 1994), partly because of the Russian government's leasing program. Fertilizer production rose during the first quarter of 1995 relative to the same period in 1994. Also, fertilizer production in **Ukraine** increased in the first part of 1995.

However, although helpful in the short run, subsidies might prevent or slow down needed restructuring. Input enterprises have shown some progress in developing new products and in modernizing production processes through joint ventures with international firms. Farmers are also responding to price signals as they shift land to more profitable crops and adjust use of manufactured inputs. If the goal of the subsidies is to support agriculture through the transition period, income support through decoupled payments may be more efficient rather than programs that further distort input or output markets.

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FSU Trade Policies: Import Controls Increasing

In 1994, the main FSU countries substantially reduced controls on agricultural exports, while restricting agricultural imports. Although import controls involve real economic costs, the policy change indicates that reform is successfully motivating farms to behave more like producers in Western market economies. Reform is forcing farms to be more self-financing and more responsible for selling their output. One way they respond is by lobbying the State for protection from foreign competition. As reform progresses, the move from export to import restrictions should continue. [Sharon S. Sheffield and William M. Liefert]

During 1992-93, most FSU countries closely controlled agricultural and food exports. Virtually no restrictions existed for food imports, which were encouraged, sometimes even subsidized. The main change in the agricultural trade policy of certain FSU countries in 1994 was decreased controls on exports and increased restrictions on imports (mainly tariffs). Although import tariffs so far have not been that high (15-30 percent, often higher for countries without most favored nation (MFN) status), they nonetheless indicate that policy is switching from defending consumers to defending producers. Thus, these countries are adopting trade policies more characteristic of Western market economies rather than planned economies. Protectionism involves economic costs: it interferes with markets, distorts prices, and redistributes real income. Yet, increasing protectionism indicates that reform is succeeding in making farms behave more like market-oriented producers.

During the Soviet period, the State gave farms their inputs, set output targets, and purchased virtually all of farms' production. A farm did not have to worry about selling its output and was indifferent as to whether the State was importing or exporting any of the type of commodities that the farm produced. During the first 2 years of reform following the Union's breakup (1992-93), this tight relationship between farms and the State loosened somewhat; in particular, farms were given more responsibility for obtaining inputs. Yet, in all FSU countries other than the Baltic States, the government still generally functioned for agricultural output as a buyer of last resort (although farms had the option to sell to other purchasers) and continued to provide farms with generous subsidies.

Agricultural trade policy during the past 2 years encouraged imports while strongly restricting exports. To a large degree, this policy reflected Soviet-era thinking that favored, at all levels of the economy, the inflow rather than outflow of goods, an appropriate attitude for a command, supply-driven economy. This pro-inflow and anti-outflow bias was reinforced by a disruption in the production and distribution of agricultural goods following the breakup of the Union, which raised the fear of local food shortages.

In 1994, in the more quickly reforming FSU countries, the State substantially reduced farm subsidies, and decreased the amount of farm output it would buy. The lack of funds for subsidies and procurement was as much (if not more) a reason for the policy changes as was the desire by the State to accelerate policy and institutional reform in the agricultural sector. More against than with their wishes, farms were given more responsibility for marketing their output and more pressure to be self-financing; that is, they were forced to behave more like market-oriented producers. The new overriding concern to sell their output (and at the highest possible price) is motivating farms to lobby for the type of State support more common to market, rather than planned, economies--such as restricting foreign competition. As market-oriented reforms continue, export controls are likely to fall further, and pressure for import restrictions is likely to grow.

Russia, **Ukraine**, **Belarus**, and the **Baltic** countries have all been moving toward increased control of imports, with change in Russia and the Baltic States the strongest. On the other hand, the **Central Asian** and **Transcaucasus** countries continue heavy use of export rather than import restrictions. At times, FSU countries have controlled both exports and imports of the same product, suggesting they were in the middle of systemic and policy reform.

Russian Trade Policy Slowly Liberalized in 1994; Possible Retrenchment in 1995

One of the most significant shifts in FSU trade policy in 1994 occurred in the **Russian Federation**, where export controls were relaxed and import tariffs introduced for many goods, in particular for agricultural products. However, these policy changes have not always been implemented as intended or produced the desired effects. Thus, further adjustment of the trade regime is being discussed. The desire to join the World Trade Organization (WTO) will also affect Russia's trade policy in the coming years.

In 1994, a number of government decrees and orders liberalized export trade, mainly by lowering or eliminating export taxes and quotas and reducing the level of centrally controlled exports. The liberalization began with a Presidential decree in May 1994 that eliminated all export controls beginning July 1, except those required by international agreements (such as for textiles and aluminum) and intergovernmental agreements with CIS nations (which specify trade volumes).

Additional decrees in 1994 created a registration system to cover strategic commodities no longer subject to quotas and licenses. Agricultural exports requiring registration include wheat, soybeans, and sunflowerseeds. Some argue that the new registration policy allows the government to retain some

Slow Progress for WTO Accession Expected

Negotiations for accession to the World Trade Organization (WTO) for **Russia**, **Ukraine**, and the **Baltic** nations (**Estonia**, **Latvia**, and **Lithuania**) began in 1993. Progress, however, could be slow as negotiations hinge in large part on the discrepancies between existing policies and WTO regulations. A recent shift toward protectionism in the FSU region could complicate WTO accession, but it could also provide these nations with some flexibility to bind tariff commitments and convert nontariff barriers. WTO working parties are evaluating the trade memoranda of these countries, and WTO member nations could begin negotiating on the specific terms of accession by the end of the year. Once these countries gain membership (if not earlier), the other FSU countries holding observer status will likely seek WTO membership.

The accession of FSU countries into the WTO will probably not have a large immediate effect on their agricultural trade. While WTO membership will lower trade barriers facing FSU exports (and vice versa), these countries are not significant agricultural exporters to nations outside the region. In the near term, some FSU agricultural exports will probably continue to suffer competitively because of low quality. Yet, as subsidized exports and import barriers are lowered under the recent Uruguay Round agreement, FSU exports of certain agricultural products could become more competitive.

WTO accession requires applicants to bind all tariffs to an agreed-upon level, and to remove all nontariff trade barriers (such as quotas, licensing, bans, state trading restrictions). These concessions are then extended to all contracting parties through adherence to the MFN clause. This provides nondiscrimination and reciprocity, the main principles of the WTO.

Regarding agriculture, accession negotiations will also establish a maximum level of internal support, as measured by an aggregate measure of support (AMS). While government support in some FSU countries has declined due to reduced budgetary resources, pressure by political groups to maintain sizable support to agriculture (primarily through soft credits and subsidies) continues. WTO accession will require the FSU countries to limit support policies that distort trade to a level quantified and agreed upon in the accession process. However, policies considered to have little or no trade distorting effect would be exempt. Moreover, ceilings on export subsidies and adherence to provisions of the WTO Sanitary and Phytosanitary Agreement are also part of the terms of accession.

Although there was some reluctance to admit the Soviet Union and its successor countries into the GATT in the past, their membership is now, for several reasons, in the interest of all WTO members. First, participation by the FSU countries in international economic organizations, such as the WTO, would help move their policies in a direction similar to those in the West. For example, membership in the World Bank and the IMF have already produced domestic leverage for policies that support market-directed economic activity. Affiliation with the WTO would also increase FSU countries' exposure to market-economy principles. For example, adherence to WTO principles of market access and internal support will reduce the use of distortive policies that hinder the development of a market economy.

Second, increasing the level of multilateral trade helps to minimize further movement toward trade-retarding bilateralism. In the FSU region, bilateral agreements are generally marked by barter trade and/or inefficient government agreements to supply commodities at set prices. Moreover, improved multilateral market access could play a significant role in the economic recovery of these countries and reduce the need for massive aid to assist their transition to market-based economies. [Sharon S. Sheffield]

control over exports. On the other hand, certain government officials have proposed reimposing export quotas on agricultural products such as wheat and sunflowerseeds, primarily due to the lower than anticipated 1994 harvest.

Growing competition from imports led the **Russian** government in 1994 to create a new import tariff schedule. The agricultural and food goods most affected by the new tariffs are those for which imports have been rising and domestic production falling the most: livestock products (including dairy), fruits and vegetables, white sugar, cocoa products, alcohol, and tobacco goods (which also face sizable excise taxes).

Tariff exemptions existed for some special interest groups, probably including **Russia**'s three main urban centers--Moscow, St. Petersburg, and Yekaterinburg. (Urban dwellers consume a disproportionate amount of Russia's food imports.) The weekly journal *Kommersant* stated that, in 1994, 72 percent of imported food entered Russia duty-free. The ineffectiveness of import tariffs has led some officials to propose eliminating all import duty exemptions and possibly introducing import quotas. In April, President Yeltsin issued a decree ending customs privileges previously extended to both special importers and exporters. Moreover, several government officials have indicated that tariffs will be increased for certain food items by mid-1995.

During the past couple of years, there have also been strong controls on the flow of foodstuffs within Russia (and in other FSU countries, such as **Ukraine**, **Belarus**, and **Kazakhstan**). As with agricultural trade at the national level, restrictions have been stronger on food outflows than inflows. Government bodies at all levels--oblast, raion (district), and city--have established controls, which have taken the form of quotas, licenses, taxes, and complete bans on export.

The reasons mentioned earlier why national governments have restricted food exports apply also to regional and local governments. Another cause of regional restrictions is that in many areas in **Russia** (as well as other FSU nations), some government bodies below the national level have been subsidizing consumer food prices. When the FSU countries liberalized consumer food prices at the national level, local governments were given the freedom to control food prices, though with the responsibility for covering the necessary subsidies. To prevent local producers from selling their output in neighboring regions or countries paying higher prices, government authorities had to combine price controls with export controls.

Local export controls have therefore impeded trade within and between FSU countries. Yet, within **Russia** and other FSU nations, local governments are apparently moving away from controls on food outflows. One reason is that they can no longer afford the subsidies that price controls require; if price controls are abolished, one of the major grounds for export controls also ends. The prevalence of informal "shuttle trade" has also undermined controls on trade flows. Thus, as economic reform progresses, regional and local controls on food exports should diminish.

Ukraine, Belarus, and Moldova Follow Russia's Lead

Ukraine, **Belarus**, and **Moldova** have also switched from export controls (mainly quotas and licenses) to import restrictions (mostly tariffs). However, these countries have maintained stronger export controls than **Russia** for certain agricultural products, especially grain.

In 1994, former **Ukrainian** President Kravchuk issued a decree exempting many commodities from export licenses and quotas. The exemption, however, did not include grain, and in August 1994, wheat, rye, and flour exports were temporarily banned.

At the end of 1994, the **Ukrainian** government announced that in 1995 most export quotas would be discontinued, except for grain. However, the government has indicated that the grain quota will be lifted in the second half of 1995. Yet, if the grain harvest is little improved over 1994, the export quota could remain. Moreover, in 1995 the government apparently will continue to influence the grain export price (mainly by setting indicative prices), despite IMF protests.

In 1994, **Ukraine** also followed Russia in introducing sizable import tariffs on a number of foodstuffs. By midyear, tariffs existed for nearly all major agricultural goods, with imports from countries without most favored nation (MFN) status facing significantly higher rates. A new import tariff schedule is expected in 1995. Some officials have said that if tariffs do not stem imports of foodstuffs, nontariff controls, such as quotas, might be necessary.

Trade liberalization in **Belarus** has moved at the same slow pace as overall economic reform. Through agreements signed in 1994 and 1995, Belarus has moved its regime of trade controls close to that of Russia's. Thus, in 1994 Belarus reduced or eliminated export quotas and taxes, except those that are part of international agreements, such as for textiles. At the same time, President Lukashenko has made strong statements supporting protectionism, and import tariffs have been imposed on a range of goods.

Trade liberalization in **Moldova** has moved faster than in Ukraine and Belarus. In 1993-94, most export quotas and licenses were abolished (an exception again being export licenses for grain). However, in 1994 there were import quotas and licenses for grain, sugar, vegetable oil, meat, dairy products, and tobacco. Import tariffs were also raised, although imports from within the CIS, developing countries, and nations with which Moldova has free trade agreements were reportedly exempt.

Baltics Continue To Lead Region in Trade Reform

In 1994, the **Baltic** countries of **Estonia**, **Latvia**, and **Lithuania** continued to make strong progress in their transition to a market economy and expansion of trade with the West. However, agricultural trade became more protectionist, with import tariffs introduced in Latvia and Lithuania and proposed in Estonia. Although Lithuania reduced tariffs in November 1994 to meet IMF requirements, in early 1995 it appeared to be considering increasing agricultural producer subsidies and creating nontariff import barriers.

The pressure to protect agricultural producers has been strong in **Latvia** and **Lithuania**, where agriculture is a large part of the economy. In both countries, import tariffs have been imposed on many foodstuffs, particularly livestock and dairy goods, the nations' main agricultural products. Lithuania also has import quotas on feed and breeding animals, pork for sausage manufacture, grains and mixed fodder, raw material for sugar processing, and alcohol. In Latvia, demands by the Farmers' Union party in July 1994 to further increase farm support and tariffs helped fell the coalition government. As of the end of 1994, import tariffs on food products were increased and customs officials were permitted to apply a special "minimum price" if the declared customs value was deemed too low. Moreover, in early 1995, the possible introduction of import quotas was being discussed.

The **Estonian** government as of mid-1995 had resisted efforts by the Ministry of Agriculture to put tariffs on meat and dairy imports, citing the negative effects they would have on agricultural efficiency and consumer prices. However, given that recent elections brought a center-left coalition (including an agrarian party) to power, import tariffs could still be introduced. The Agriculture Ministry has also proposed setting a minimum import price, similar to that in Latvia.

Central Asia: Cautious Steps Towards Liberalizing Trade

The five nations of Central Asia--**Kazakhstan**, **Kyrgyzstan**, **Uzbekistan**, **Turkmenistan**, and **Tajikistan**--have liberalized trade to varying degrees. The first two have made relatively more progress in economic reforms and liberalizing trade more than the last three, where the States still largely control trade, especially exports.

In 1994, **Kazakhstan** and **Kyrgyzstan** reduced export licenses and quotas, and unlike other FSU countries, have not yet created an extensive regime of import tariffs. Kazakhstan has indicated that remaining export quotas and licenses will be either substantially diminished or eliminated in 1995. However, the State continues to regulate exports of grain, the country's main surplus product. Although grain trade has been partially liberalized, all grain exports must go through a special commodity exchange, where a price commission reviews transactions to prevent underpricing. In 1995, Kazakhstan also signed a memorandum with Russia and Belarus to create a customs union that over time should move Kazakhstan's trade regime closer to that of Russia's. In both Kazakhstan and Kyrgyzstan, import tariffs and excise taxes exist mainly for luxury goods, such as alcohol, tobacco products, cars, and electronic equipment. In 1994, Kyrgyzstan increased duties on such goods by 200-400 percent.

In **Uzbekistan**, **Turkmenistan**, and **Tajikistan**, trade remains tightly controlled. All have largely retained the Soviet-era bias of controlling exports, while imposing few barriers to imports to ensure sufficient domestic supplies of key agricultural goods. Although Uzbekistan and Turkmenistan have reduced the commodities subject to quotas and licensing, and created a commodity exchange system to facilitate export, most exports remain under State control. Most agricultural products are considered "strategic" (most importantly cotton) and therefore are subject to export quotas and licenses or cannot be exported whatsoever.

Caucasus: Strong Export Controls, Few Import Barriers

As in most of Central Asia, trade policies in the Caucasian countries of **Armenia**, **Azerbaijan**, and **Georgia** are oriented toward encouraging imports while tightly controlling exports. In part, this emphasis reflects the region's deficit position for many commodities, especially foodstuffs. Many commodities are banned from export, although Azerbaijan created quotas for some "strategic" commodities in 1994, the export of which was previously forbidden. Although Armenia and Azerbaijan have increased import tariffs on some luxury items, such as alcohol and tobacco products, tariffs on most imported foodstuffs are either nonexistent or very low.

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U.S. Agricultural Exports Continue Shift to HVP's, Total Value Expected To Remain Low

The value of U.S. agricultural exports to the FSU countries in the short run is expected to remain near fiscal 1994's level ($1.5 billion), but the composition of those exports will likely continue to shift away from bulk commodities to high-value products (HVP's). U.S. export programs may play a smaller, yet changing, role in facilitating sales to the FSU region. Export credit and donation program levels will probably be low relative to the early 1990's, while export subsidies to all regions will be reduced over the next 6 years in accordance with the recently concluded GATT agreement. However, new programs, such as credit guarantees to private sector importers or suppliers, are being proposed. Nonprice programs, which are not affected by GATT, could also increase FSU demand for U.S. HVP exports. [Sharon S. Sheffield]

During the next 1-2 years, the value of U.S. exports to the FSU countries is not expected to differ much from fiscal 1994's $1.5 billion, the lowest level in 8 years. Ongoing economic reforms have contributed to the decline in the value of U.S. agricultural exports to the region, which since fiscal 1989 have been cut by over half. Although FSU grain and oilseed imports (from extra-FSU sources) are projected to remain weak in the near term, the share of high- value products (HVP's) in U.S. exports should continue to increase.

U.S. Ag Exports to FSU Region Forecast at 8-Year Low in Fiscal 1995

As of May, USDA projected fiscal 1995 U.S. agricultural exports to the FSU region at $1.2 billion, down 20 percent from fiscal 1994, and the lowest level since fiscal 1987. Fiscal 1995 U.S. exports to **Russia** are projected at $800 million. Fiscal 1994 exports to FSU nations decreased slightly (5 percent) from fiscal 1993. The primary reasons for the forecast drop are continued weak demand for extra-FSU grain imports and lower export programming (credit and donations). Increases in HVP exports are expected to offset some of the decline in bulk grain and oilseed exports.

While total FSU agricultural imports have declined in recent years, increased HVP purchases are shifting the composition of these imports considerably. This shift was particularly evident in fiscal 1994, as the share of bulk commodities in U.S. agricultural exports to the FSU region fell to under 40 percent, compared with nearly 70 percent in fiscal 1993. Sharp increases were registered in U.S. exports of pork, poultry, fruits, nuts, vegetables, tropical products (processed chocolate, tea, and coffee products), and other consumer-oriented products (tables 5 and 6). The FSU region became the top market for U.S. poultry meat exports, and one of the top ten markets for U.S. consumer food exports in 1994. However, agriculture's share of total U.S. exports to the FSU region is declining, from previous levels as high as over 80 percent to less than 30 percent in 1994 (figure 2).

Other trends in U.S. agricultural exports to FSU countries are rising private sector trade and declining U.S. export programming to facilitate sales. During fiscal 1991-93, the FSU countries received significant U.S. export financing (which shifted from commercial to mostly concessional/grant after the breakup of the USSR). Export subsidies (such as the Export Enhancement Program, or EEP) have been available since fiscal 1987. Fiscal 1994 export programming was much lower than historic levels and is likely to remain relatively small in fiscal 1995 (table 7). While these programs generally focus on grain and oilseed products, they are also facilitating some commercial sales of HVP food exports. Most notable has been the recent use of EEP to subsidize pork exports, and the Dairy Enhancement Incentive Program (DEIP) to assist recent sales of butter, powdered milk, and cheese. However, FSU poultry meat imports from the United States rose sharply in 1994 without the use of EEP or other export programming (a small amount sold to **Russia** may have been facilitated with private GSM-102 credit guarantees). Yet, previous poultry shipments under export credit and food aid programs probably helped stimulate demand by introducing U.S. products to Russian consumers.

U.S. Export Programs to FSU Countries Continue Decline; New Focus Expected

Given the shift in FSU agricultural imports, both in terms of volume and composition, U.S. export programming is also

Table 5--U.S. agricultural exports to FSU region, fiscal 1989-95

Commodity	1989	1990	1991	1992	1993	1994	1995 [1]
				$ million			
Wheat	820	550	194	1,029	566	257	42
Corn	1,872	1,849	979	737	493	275	1
Soybeans	90	76	99	122	10	5	0.04
Soybean meal	372	304	355	488	111	171	20
Pork	--	--	--	--	1	29	35
Poultry meat	--	82	62	41	27	282	192
Dairy products	--	79	1	68	120	129	28
Fruits, nuts, veg.	18	20	11	22	38	69	32
Sugar & trop. prods.	--	--	14	12	46	107	16
Other	127	46	43	185	149	162	79
Total	3,299	3,006	1,758	2,704	1,561	1,486	445
				1,000 tons			
Wheat	5,294	3,739	2,451	8,797	4,529	2,183	261
Corn	15,573	16,326	9,077	6,533	4,965	2,640	9
Soybeans	299	342	441	543	46	19	0.1
Soybean meal	1,312	1,405	1,716	2,202	541	810	110
Pork	--	--	--	--	0.3	18	22
Poultry meat	--	112	83	54	221	336	241
Dairy products	--	50	--	34	83	95	16
Sugar & trop. prods.	--	--	42	29	20	53	7

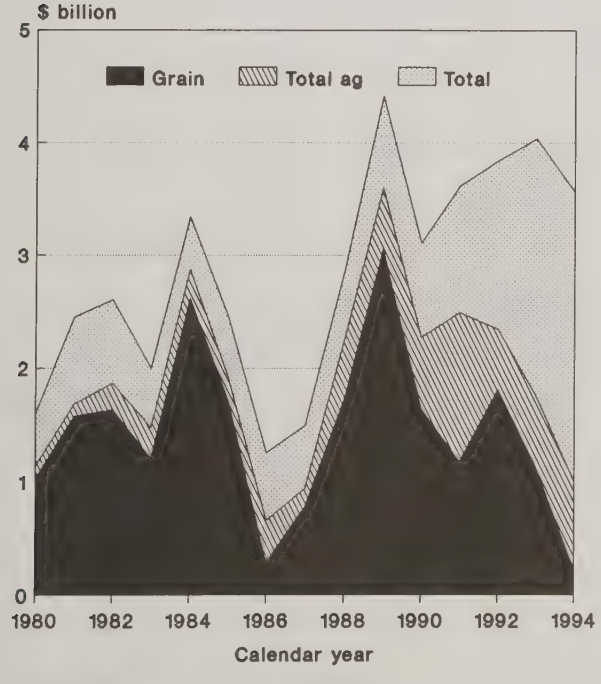
-- = Negligible or none.
[1] October-February 1994/95.
Source: USDA.

Table 6--U.S. agricultural exports to Russia, fiscal 1992-95

Commodity	1992	1993	1994	1995 [1]
		$ million		
Wheat	406	275	92	28
Corn	152	336	242	1
Soybeans	--	--	--	--
Soybean meal	131	82	130	1
Pork	--	0.8	28	35
Poultry meat	7	27	258	188
Dairy products	55	83	93	15
Fruits, nuts, veg.	15	26	55	25
Sugar & trop. prods.	5	44	104	15
Other	68	91	102	52
Total	839	965	1,104	360
		1,000 tons		
Wheat	3,068	2,196	762	174
Corn	1,309	3,380	2,337	9
Soybeans	--	--	--	--
Soybean meal	611	394	612	5
Pork	--	0.3	18	22
Poultry meat	9	43	315	236
Dairy products	27	49	76	10
Sugar & trop. prods.	14	20	52	7

-- = Negligible or none.
[1] October-February 1994/95.
Source: USDA.

Figure 2
U.S. Exports to the FSU Region



Source: USDA, U.S. Dept. of Commerce.

changing. To date, lower levels of the primary export programs (commercial GSM-102 credit guarantees, concessional PL 480 title I loans, section 416b donations, and the grant Food for Progress program) have been announced for the FSU region. This partially stems from decreased funding of food assistance programs and creditworthiness issues concerning GSM programs and, in the case of the section 416b program, the lack of surplus commodities for donation. Moreover, demand for these programs, especially by the **Russian** government, also appears to be lower.

The trend in reduced export and food aid programming is likely to continue, given domestic political pressure to lower U.S. government spending. The upcoming farm bill debate will also give legislators the opportunity to reevaluate existing programs. The recent GATT agreement also reduces the level of U.S. (and EU) subsidized exports over the next 6 years. New export facilitation programs will probably be developed more in tune with current world developments, such as the widespread movement (not just in the FSU region) to more market-oriented economic systems. The use of some existing programs not affected by GATT constraints may also increase.

What kind of outlook for U.S. agricultural exports and programming to the FSU countries can be formulated given these trends? First, the move away from traditional export programs to facilitate sales will probably continue. Because of

Table 7--U.S. export assistance to the FSU, fiscal 1992-95

Program	1992	1993	1994 [1]	1995 [2]
		$ million		
Commercial				
GSM-102 [3]	2,585	523	24	40
EEP [4]				
Wheat	350	114	48	0
Barley	10	5	1	--
Rice	4	0	0	--
Pork	0	0	14	13
Vegetable oil	5	0	0	0
DEIP [5]	1	--	4	8
SOAP [6]	5	0	0	0
Concession/grant				
PL 480, Title I	60	66	79	46
Section 416b	125	257	60	0
Food for Progress	72	890	101	98

-- = negligible or not available.
[1] Preliminary final, as of February 1995.
[2] Preliminary, as of March 1995 (May for GSM-102).
[3] FY 91-94 are export registrations, FY 95 are allocations.
[4] Export Enhancement Program, mean bonus.
[5] Dairy Export Incentive Program (butter, cheese, milk powder), mean bonus.
[6] Sunflowerseed Oil Assistance Program, mean bonus.
Source: USDA estimates.

FSU Import Demand Shifts from Bulk to Increased HVP's

In recent years, the composition of extra-FSU agricultural imports has changed dramatically. Trade in traditional bulk commodities has declined while that of high-value products (HVP's) has sharply expanded. This trend is expected to continue (varying by country) in the short-to-medium term.

Several countries have introduced barriers to HVP imports, most notably **Russia**, which accounts for the largest share of the region's agricultural imports. The long-term effect of these barriers is uncertain, given the limited effectiveness of current policies and the goal of most FSU countries to become members of the WTO. However, demand for certain extra-FSU HVP imports could weaken over the long term. The main reason would not be increased protectionism, but expected efficiency and quality gains in domestic production and marketing (through technology transfers and foreign investment) and possibly an increase in intra-FSU trade.

Agricultural products can be generally classified as either bulk or high value. Bulk agricultural commodities are defined here as grains, oilseeds, and cotton and other plant fibers. HVP's can be further classified as unprocessed (such as fruits, nuts, and vegetables), processed (including meat and dairy products, and beverages), or semiprocessed (flour and vegetable oil).

The breakup of the USSR and the difficult transition in most FSU countries to a market-based economy have significantly affected the level and composition of the region's agricultural imports. Beginning in 1993 and continuing in 1994, the value of extra-FSU agricultural imports significantly decreased relative to the high Soviet purchases during the 1980's. The main reasons for the decline have been hard-currency shortages and economic reforms that have significantly lowered grain use and decreased consumer purchasing power.

However, based on preliminary *Goskomstat Rossii* data (which may understate imports), the value of **Russian** agricultural and food imports in 1994 from outside the FSU region appears to have increased by one-third to around $8 billion, while the share of these products in total imports rose to nearly 30 percent (in value terms), compared with around 22 percent in 1993 (table 8). The growth in food imports came from increased purchases of higher value livestock goods (meat and dairy), fruits and vegetables, beverages, and snack foods, while bulk imports declined sharply. Moreover, the increase in 1994 HVP imports appears to have largely offset the lower value of bulk imports.

The shift in **Russia's** 1994 food imports reflects two major developments: (1) changing consumer income distribution and preferences (most notably in urban areas, the destination of most extra-FSU agricultural imports) and (2) the growth of the private sector in foreign trade, which has enabled private traders to respond quickly to changing consumer demand. Economic reform is creating a growing, urban upper middle class that desires higher quality, better packaged, and easier to prepare food products. Continued regional barriers to trade also hamper the flow of commodities from surplus to deficit regions (such as the large cities). Another possible stimulant to food imports has been past Western export financing and food assistance that helped develop consumer preference for various products.

While agrarian interests have called for increased protectionism, foreign competition is already motivating Russian producers to respond to changing consumer preferences.

Table 8--Russian agricultural imports from external FSU sources, 1991-95

Commodity	1991	1992	1993	1994	1995 [1]
			1,000 tons		
Wheat	10,689	17,593	5,699	1,184	na
Barley	2,882	3,967	615	na	na
Corn	5,457	5,490	4,391	900	na
Rice	322	7	na	na	na
Wheat flour	556	944	54	na	na
Vegetable oil	201	463	93	55	47
Sugar, total	3,269	3,691	3,109	2,286	na
Coffee	45	35	13	26	5
Cocoa beans	17	24	na	na	na
Tea	143	47	55	98	na
Meat [2]	517	291	85	387	125
Poultry meat [2]	89	46	74	411	145
Butter	153	25	70	171	106
Dry milk	77	49	15	37	na
Citrus	266	43	172	869	na
Apples	156	79	81	263	na
Bananas	8	2	19	na	na
			$ million		
Total ag imports	na	9,312	5,950	8,245 [3]	na
			Percent		
Ag share of total imports (value)	24.6	26.6	22.2	29.2	na

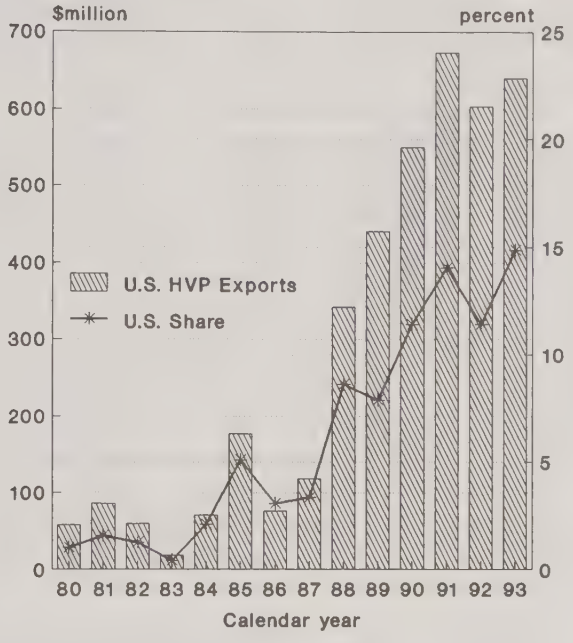
na=Not available.
[1] January-March.
[2] Fresh-frozen.
[3] Estimate.
Sources: Goskomstat Rossii; Statkom SNG; Interfax.

FSU Import Demand Shifts from Bulk to Increased HVP's—Con't.

They are paying more attention to packaging, presentation, quality, developing brand names, and marketing.

Although during the last couple of years U.S. sales of HVP's started to increase, the U.S. share of the FSU HVP import market is estimated at less than 15 percent (figure 3). The primary U.S. competitor in the FSU HVP market is the European Union (EU). In 1992, the EU appears to have provided slightly over 50 percent of total FSU HVP imports and in 1993 almost 40 percent. The EU is a significant exporter to the FSU region of chocolate products, beer and wine, coffee, crackers and other snack foods, fruits and vegetables, oilseed products (vegetable oil, margarine), and livestock and dairy products. The main reasons for strong EU sales include proximity to the western FSU region (especially to Moscow and St. Petersburg), strong economic and trade ties, investment in retail and wholesale outlets, and joint ventures with Russian food distributors and processors. Moreover, some of the EU's strong market share can be attributed to export subsidies, particularly for livestock products. Asian and Middle Eastern exporters such as China, Israel, and Turkey, are also supplying a significant portion of FSU consumer food imports, while HVP exports from some Eastern European countries appear to be on the rise. [Sharon S. Sheffield and Peter Liapis]

Figure 3
U.S. HVP Exports to the FSU Region and U.S. Share of FSU HVP Imports



Source: U.N. Trade Data.

the region's creditworthiness problems, the GSM-102 program is probably not going to be used beyond small-scale packages to some of the more successful reforming countries (or those with hard currency-earning potential). Continued use of GSM-102 for private traders is likely, but the packages will probably also be small. Development of a GSM program for exporters is being discussed.

Concessional and grant food aid will continue to decline and be targeted primarily at those FSU countries most affected by food supply disruptions resulting from prolonged civil strife and political instability. While the FSU's recent EEP and DEIP activity indicate the possible benefits of using these programs to expand U.S. market share, the reductions in these programs envisioned under the GATT agreement may make it more difficult for the United States to target the FSU region with export subsidies.

Although traditional approaches to export promotion in the FSU countries will likely decline, the use of other programs, either existing or newly created, could grow. For example, use of nonprice (so-called "green-box") programs are not affected by the GATT agreement. In the United States, this includes the Market Promotion Program (MPP) and Foreign Market Development Program (FMD). These programs provide funds to eligible nonprofit trade organizations and private firms to finance activities to educate foreign consumers and traders about U.S. agricultural products. A high proportion (75 percent) of these programs' funding is to promote high-value products, which account for most of the growth in FSU import demand. U.S. bulk commodity exports might also benefit from MPP or FMD activity, by promoting new end uses for grains and oilseeds (industrial products, etc.).

Regardless of U.S. government programs, U.S. exporters, agribusinesses, and commodity organizations will probably increase their marketing activities, cultivate stronger ties with the FSU private sector, and invest in improving trade and retail services to boost sales. To a large extent, European traders and businesses have already taken these steps and acquired a large share of the FSU market for consumer goods imports. However, through competitive pricing and increased service and promotion, U.S. exporters could increase their share of the FSU HVP market.

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Grain Imports Continue To Fall as FSU Agricultural Sectors Contract

In recent years, despite declines in FSU grain production, grain imports have fallen sharply. Grain utilization has dropped due to large contractions in the FSU livestock sector. However, as FSU consumption begins to rebound, much of it will likely be met by higher domestic grain output and increasing intra-FSU trade. [Jaclyn Y. Shend]

FSU grain imports in 1995/96 (July/June) are likely to fall to the lowest level since the late 1970's. A small increase in 1995/96 grain output, continued decline in grain use, financial constraints, and low levels of export financing are likely to limit FSU grain purchases. In the long term, projected higher real incomes will likely stimulate expansion of the FSU livestock sector, thus increasing grain use. However, most of the rise in grain use should be met by higher grain output and intra-FSU trade. Currently, FSU grain markets continue to be distorted by trade barriers and inefficient State procurement systems. Yet, as State procurement agencies are faced with limited finances and continue to offer low prices and late payments, farmers are beginning to look for alternative marketing channels, which over time should result in a more efficient FSU grain market.

FSU 1995/96 Grain Imports Fall to Lowest Levels in Over 15 Years

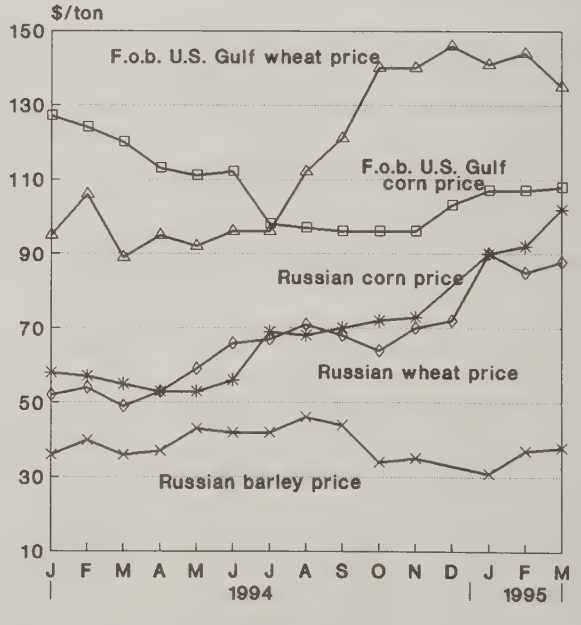
In May 1995 USDA projected FSU 1995/96 grain imports at 11.2 million tons (including both extra- and intra-FSU trade), relatively unchanged from last year's near record low levels, as lower grain use and slightly higher grain output continue to dampen import demand (table 9). FSU 1994/95 total grain imports are estimated at 10.8 million tons, about one-fifth of the high levels in the late 1980's. Hard currency constraints and high wheat prices on world markets have also limited grain imports. In early 1995, 3rd class wheat prices, in **Russia's** main wheat producing areas, were about 60 percent of the f.o.b. U.S. Gulf price minus the EEP bonus for #2 hard winter wheat (figure 4). (However, U.S. #2 hard winter wheat is of higher quality than Russian 3rd class food wheat.) Furthermore, food assistance to the FSU countries continues to decline as donor countries tighten their budgets. The GATT agreement calls for reduction of export subsidies over the next 6 years, such as the Export Enhancement Program (EEP) for wheat and barley. This will likely increase world grain prices, possibly stimulating higher FSU grain output, and further dampen FSU grain import demand.

In the context of projected increases in world wheat prices, extra-FSU wheat imports will likely continue to diminish over the next 10 years, possibly falling to 2 million tons or less by 2005, compared with about 4 million tons in 1994/95. The **Russian** Far East region, however, may remain a potential market for U.S., Australian, and/or Canadian wheat exports due to high Russian transportation costs. By early 1995, transportation costs from Russian grain growing regions to the Far East were almost $100 per ton, compared with the U.S. freight rates to Nakhodka (Russian Far East) of about $20 per ton. Other FSU wheat deficit regions, such as the **Central Asian** countries and the **Caucasus** will likely be supplied largely through intra-FSU trade.

Extra-FSU corn imports may increase in the longer term, as the livestock sector expands. The United States will likely be one of the main corn suppliers to the FSU countries because of its available supplies and competitive corn prices. FSU corn imports from China, a traditional corn supplier to the FSU region, are likely to remain low, due to increasing meat consumption in China and a rapidly growing domestic corn demand. However, Eastern Europe should remain a competitor to U.S. corn exports, mainly because of its close proximity to the FSU region. For example, Hungary reportedly exported corn to Russia in 1994/95. For many animals, though, domestically produced barley could be substituted for imported corn as feed, with barley holding a comparative advantage in production due to the FSU's shorter growing season.

U.S. 1995/96 grain exports to the FSU region are not likely to increase from last year's low levels. For fiscal 1995, GSM-102 export credit guarantees included only $12 million (under 100,000 tons at current prices) for wheat and/or coarse grains allocated to **Russian** private buyers, and $10 million

Figure 4
Russian and U.S. Grain Prices



Not including transportation costs.
U.S. wheat price minus EEP bonus.
Source: Krest'ianskie vedomosti.

Table 9--Supply and use of grain, FSU and major countries [1]

Country/year beginning July 1		Production [2]	Trade [3]		Availability	Utilization			Stock change
			Imports	Exports		F.S.I.[4]	Feed & residual	Total	
					1,000 tons				
FSU									
Total grains [5]	1992/93	185,000	36,075	9,680	211,395	73,589	130,189	203,778	7,617
	1993/94	178,617	19,560	7,970	190,207	71,961	115,878	187,839	2,368
	1994/95 [6]	142,482	10,792	7,130	146,144	69,527	92,174	161,701	(15,557)
	1995/96 [7]	154,565	11,155	8,725	156,995	70,116	88,646	158,762	(1,767)
Wheat	1992/93	89,714	23,885	6,800	106,799	49,366	52,544	101,910	4,889
	1993/94	83,289	13,515	6,500	90,304	48,057	42,041	90,098	206
	1994/95 [6]	60,127	8,875	5,250	63,752	46,253	31,566	77,819	(14,067)
	1995/96 [7]	71,070	9,350	6,400	74,020	46,994	27,567	74,561	(541)
Coarse grains [8]	1992/93	95,286	12,190	2,880	104,596	24,223	77,645	101,868	2,728
	1993/94	95,328	6,045	1,470	99,903	23,904	73,837	97,741	2,162
	1994/95 [6]	82,355	1,917	1,880	82,392	23,274	60,608	83,882	(1,490)
	1995/96 [7]	83,495	1,805	2,325	82,975	23,122	61,079	84,201	(1,226)
Russian Federation									
Total grains [5]	1992/93	101,957	21,655	1,300	122,312	39,100	78,197	117,297	5,015
	1993/94	94,389	8,700	975	102,114	37,700	65,408	103,108	(994)
	1994/95 [6]	77,350	2,975	1,925	78,400	36,700	52,291	88,991	(10,591)
	1995/96 [7]	79,500	3,325	1,800	81,025	36,059	47,786	83,845	(2,820)
Ukraine									
Total grains [5]	1992/93	35,093	2,150	380	36,863	14,450	23,605	38,055	(1,192)
	1993/94	42,120	425	825	41,720	14,310	24,732	39,042	2,678
	1994/95 [6]	32,383	340	190	32,533	14,008	20,448	34,456	(1,923)
	1995/96 [7]	36,000	100	750	35,350	14,220	21,093	35,313	37
Kazakhstan									
Total grains [5]	1992/93	28,863	400	7,700	21,563	6,165	11,280	17,445	4,118
	1993/94	20,957	50	6,050	14,957	6,066	9,561	15,627	(670)
	1994/95 [6]	15,960	0	4,950	11,010	5,825	7,051	12,876	(1,866)
	1995/96 [7]	19,300	0	5,950	13,350	6,065	6,785	12,850	500
Belarus									
Total grains [5]	1992/93	7,050	2,010	280	8,780	2,293	6,292	8,585	195
	1993/94	7,291	1,350	100	8,541	2,236	6,162	8,398	143
	1994/95 [6]	6,018	900	25	6,893	2,103	4,948	7,051	(158)
	1995/96 [7]	6,440	820	25	7,235	2,135	4,925	7,060	175
Uzbekistan									
Total grains [5]	1992/93	1,745	3,710	0	5,455	3,631	1,723	5,354	101
	1993/94	1,552	3,805	0	5,357	3,665	1,609	5,274	83
	1994/95 [6]	1,972	2,425	0	4,397	3,546	1,500	5,046	(649)
	1995/96 [7]	2,257	3,055	0	5,312	3,727	1,616	5,343	(31)
Other FSU (10)									
Total grains [5]	1992/93	10,292	6,150	20	16,422	7,950	9,092	17,042	(620)
	1993/94	12,308	5,230	20	17,518	7,984	8,406	16,390	1,128
	1994/95 [6]	8,799	4,152	40	12,911	7,345	5,936	13,281	(370)
	1995/96 [7]	11,068	3,855	200	14,723	7,910	6,441	14,351	372

[1] FSU includes 15 countries. [2] Production is in cleanweight.
[3] Includes intra-FSU and extra-FSU trade.
[4] F.S.I. = food, seed, and industrial use.
[5] Wheat and coarse grain. [6] Preliminary. [7] Projected.
[8] Includes barley, corn, millet, oats, and rye.
Source: USDA, estimates as of May 1995.

to **Uzbekistan** for wheat, although no purchases of grain have been made to date. In recent years, U.S. corn exports to the FSU have dropped even more than wheat, as FSU livestock inventories continued to fall, and farmers have large supplies of barley and rye for feed use. Furthermore, Russian barley prices are substantially below both domestic and world corn prices. In early 1995, Russian barley was trading at about 160,000 rubles ($37) per ton, compared with 400,000 rubles ($92) per ton for domestic corn, and over $100 for f.o.b. U.S. Gulf price for corn.

Intra-FSU Trade Is Likely To Increase as Grain Marketing Is Liberalized

As trade barriers are reduced in the FSU countries and private marketing channels continue to develop, internal prices are likely to approach world levels. This should stimulate increased production and exports for the FSU's large grain producing countries **Kazakhstan**, **Russia**, and **Ukraine**, and further limit extra-FSU imports. Over the next 10 years, intra-FSU grain trade is projected to rise to at least 10 million tons from 1994/95 levels of around 7 million tons. Kazakhstan could possibly supply most of the FSU deficit regions -- the **Central Asian** countries and the **Caucasus** in nondrought years. Russia will likely continue to import small quantities of food wheat and corn from outside the FSU region. But at the same time, with higher production and more efficient grain use, Russia could increase its exports of wheat and barley. Ukraine also has the potential to become a net grain exporter during years of good harvests, especially since it has the highest grain yields in the FSU region. Furthermore, as FSU grain quality improves, grain exports outside the FSU region may increase. For example, Russia reportedly exported over half a million tons of barley to Saudi Arabia and other non-FSU markets in 1994/95.

Inefficient barter operations, continued State regulation of grain trade through quotas, licenses, intergovernment agreements, and reduced grain output have limited intra-FSU grain trade. For example, during the 1994/95 harvest, **Ukraine** temporarily banned exports of wheat, rye, flour, and pasta to ensure what it perceived as necessary supplies to meet domestic needs. **Kazakhstan** continues to maintain licensing policies for grain. Although on the federal level the **Russian** government has eliminated most trade restrictions for grain exports, certain regions have placed trade barriers on grains (mainly wheat). Furthermore, there have been growing pressures to reintroduce federal quotas for wheat exports, which would distort prices and impede development of an efficient grain market. Surpluses in rye and barley in Russia, however, have shifted policy to export promotion of those grains via transportation subsidies. In late 1994, a decree was announced to subsidize 50 percent of the freight costs for feed grain exports, although it is uncertain if it was implemented.

Low State Procurement Prices Stimulate Private Grain Marketing

In 1994, State procurements of grain declined in most FSU countries, with the exception of **Uzbekistan**, **Turkmenistan**, and **Belarus**. The governments of these countries continue to provide large subsidies for State procurement and tightly regulate the grain markets (table 10).

Table 10--State procurement of total grain, FSU countries [1]

Country	1989	1990	1991	1992	1993	1994 [2]
			1,000 tons			
Russian Fed.	31,231	33,977	23,590	26,100	28,200	12,100
Ukraine	17,669	15,406	11,494	11,026	13,600	10,600
Belarus	1,291	1,239	1,085	1,636	1,647	1,738
Moldova	617	323	489	312	386	82
Kazakhstan	5,908	14,819	3,449	13,007	6,660	4,100
Uzbekistan	712	761	571	977	919	1,313
Kyrgyzstan	247	149	165	169	235	59
Tajikistan	49	51	28	14	19	11
Turkmenistan	95	97	93	267	347	720
Armenia	38	48	59	62	15	24
Azerbaijan	246	331	301	310	311	263
Georgia	19	90	na	na	na	na
Lithuania	432	375	568	na	na	na
Latvia	336	230	269	na	na	na
Estonia	187	127	197	na	na	na
Total FSU [3]	59,078	68,023	42,400	54,500	53,300	32,000

na = Not available. [1] On a calendar year basis.
[2] Preliminary. [3] 1991-94 are estimates.
Source: Statkom SNG.

The largest decline in State procurement occurred in **Russia**, as of completion of the harvest, procurement agencies (both federal and regional) received just over 12 million tons of grain, compared with 28 million tons the year before. The federal fund obtained only 2.3 million tons of grain (of which 1.7 is milling wheat), 22 percent of the target. The regional funds received 9.8 million tons, 39 percent of the target. Wheat, however, accounted for 6.2 million tons, or about 70 percent of the target. Procurement agencies used their limited funds mainly to purchase wheat, which was most needed. Declines in State procurement have increased concerns about adequate grain flows from surplus to deficit regions, especially since certain regions have put up trade barriers. Despite trade barriers for farmers, regional authorities in surplus regions are likely exporting grain to deficit regions in Russia, as well as to other FSU countries.

In **Russia**, as of late spring 1995, about 25 million tons of grain remained on farms and 3 million in State elevators for temporary storage, as farmers await higher prices. However, at the same time low State procurement prices and late payments have prompted farmers to seek alternative marketing channels, (barter, private trading companies, commodity exchanges, and payment-in-kind). In Russia, 1994 grain sales outside the traditional State channels increased to over 60 percent of marketed grain, compared with less than 40 percent a year earlier, and about 25 percent in the early 1990's. However, in calendar year 1994, total marketed grain amounted to 26 million tons, substantially lower than the in

previous year (nearly 40 million tons) due to large grain supplies remaining on farms and lower production.

In **Russia**, for the 1995/96 grain harvest, the Federal Food Corporation (FFC) under the Russian Agricultural Ministry has been appointed to act as the State procurement agency. Although prices will reportedly be negotiated and deliveries will not be mandatory, the FFC is to establish a minimum support price for producers, indexed to the inflation rate on a quarterly basis. For the first quarter of 1995, the minimum guaranteed price for third class wheat was set at 300,000 rubles ($63) per ton, compared with a market price of about 420,000 rubles ($88) per ton. Support prices for less profitable grains, such as rye, were set above market prices. However, procurement agencies will probably not have sufficient funds to guarantee the targeted food grain purchases of about 8 million tons for the Federal Fund.

State procurement in **Kazakhstan** totaled about 4 million tons in 1994, down about 40 percent from a year earlier, largely due to lack of finances. However, as State purchases fall, private traders are buying more grain from farmers (mainly wheat for export), in exchange for fuel, spare parts, and other inputs. In 1994/95, the State accounted for about 60 percent of the grain market, which was substantially lower than in previous years. According to a government resolution, sales to the State will not be mandatory for the 1995/96 harvest. Instead, the State procurement agency "Astyk" will have to compete with private traders at the Kazakh commodity exchange at free market prices, although there will be a minimum support price. The State plans to purchase 3.5 million tons of grain for federal stocks in 1995. However, regional authorities may conduct regional-level procurement and/or erect trade barriers, especially since the ownership shares for the majority of grain elevators will be transferred to the regions.

In **Ukraine**, State procurements in 1994/95 declined slightly to 10.6 million tons from 13 million tons a year earlier, mainly because of a smaller crop. For the 1995/96 grain harvest, the Ukrainian government plans to maintain State orders close to last year's levels, but purchases are to be broken down into national and regional reserves, similar to Russia's system. A February 1995 decree stipulates that State contracts will prepay 50 percent of grain purchases in cash or inputs, and farmers will be required to sell grain at prices equivalent to those in effect when advance payments were made. Contract prices will be set in U.S. dollars, at $73 per ton for 3rd class wheat, to offset devaluation of the Ukrainian currency. Only after State contracts are fulfilled will producers be able to sell their grain through other channels. However, the level of State procurements in Ukraine as in other FSU countries will mainly depend on the availability of State financing.

In **Uzbekistan**, State procurements in 1994 continued to account for over 90 percent of total grain marketing. For the 1995/96 harvest, however, the Uzbek government has reduced grain procurement quotas to 50 percent of production from 75 percent a year earlier, which should stimulate the development of some private channels.

Despite Smaller Area, FSU Grain Output Will Likely Increase in 1995/96

As of May 1995, FSU 1995/96 grain production was forecast by USDA at 155.7 million tons, almost 10 percent higher than the 1994/95 crop, which was the lowest grain harvest in over 20 years (table 11). While total FSU grain area continues to decline, yields are projected above depressed 1994 levels. Farmers in most FSU countries are cutting back areas planted to less profitable crops. Over the next 10 years, grain yields are projected to rise, while area will likely stabilize, thereby resulting in higher output. As FSU grain prices move toward world levels and terms of trade for agricultural producers stabilize, farmers should utilize inputs more efficiently to raise grain yields. FSU grain area and production will continue to shift into more profitable grain crops, such as wheat, as well into other crops, particularly sunflowerseeds.

Area sown to the 1995/96 winter grain crops fell in most FSU countries. Governments in **Belarus**, **Turkmenistan**, and **Uzbekistan** have pursued policies to increase wheat production and continue to provide large subsidies to agricultural producers. In **Russia** and **Ukraine**, sown winter grain areas fell 7 and 10 percent, respectively, mainly due to dry soils during fall seeding and relatively high fuel-related costs. In **Russia**, however, sown winter wheat area expanded, while rye area continued to drop; by the end of 1994, wheat prices were more than 50 percent above rye prices. In **Ukraine**, farmers will likely reseed winterkill losses with more spring wheat than spring barley as in prior years. For the 1995/96 harvest, winterkill in Russia and Ukraine is estimated at around 15 percent, slightly above average, but considerably below the preceding year. For the spring seeding campaign, farmers had adequate seed supplies, and, as of early May, grain sowing in **Russia** was well ahead of last year.

FSU wheat production in 1995/96 was estimated by USDA in May 1995 at nearly 20 percent above 1994/95. Wheat yields in most FSU countries are likely to improve from drought-reduced 1994/95 levels, and area will likely expand. Over the long term, FSU wheat production is likely to increase, especially since wheat is one of the most profitable crops in the FSU. For example, in 1994, **Russian** wheat prices rose about 3 times in ruble terms and 30 percent in dollar terms, considerably faster than most other grain prices.

USDA estimates coarse grain production largely unchanged in 1995/96. An estimated 6 percent decline in coarse grain area may be offset by a small improvement in yields. In 1994/95, large stocks of barley and rye resulted in lower prices for these crops. In early 1995, **Russian** barley and rye prices were about 160,000 rubles ($37) per ton, more than 50 percent below wheat and corn prices. FSU corn output in 1995/96 is estimated up from last year's depressed levels. Russian corn prices increased sharply in early 1995 mainly due to a near 50-percent drop in 1994/95 corn output. In 1994/95, a drought reduced corn yields, while harvest delays and financial difficulties resulted in a sharp reduction of corn area (more than 40 percent of corn area was cut for silage instead of grain). In the long term, however, FSU corn production and yields may increase as farmers utilize more hybrid corn seeds suitable for the shorter FSU growing season, thus reducing losses. Barley production will largely depend on winter wheat

Table 11--Area, yield, and production of selected grains (cleanweight), major FSU countries [1]

Item/ year	Wheat	Barley	Rye	Oats	Millet	Corn	Coarse grains	Rice [2]	Total grain
RUSSIAN FEDERATION									
Area				*Million hectares*					
1992	24.3	14.6	7.6	8.5	1.9	0.8	33.4	0.3	57.9
1993	23.5	15.4	6.0	8.4	1.5	0.8	32.1	0.3	55.9
1994	22.2	16.4	3.9	8.4	1.1	0.5	30.3	0.2	52.6
1995	23.0	15.5	3.0	8.0	0.8	1.0	28.3	0.3	51.6
Yield				*Tons per hectare*					
1992	1.90	1.85	1.83	1.32	0.82	2.64	1.67	1.85	1.77
1993	1.85	1.72	1.53	1.38	0.77	3.04	1.59	1.72	1.70
1994	1.45	1.65	1.54	1.29	0.45	1.80	1.50	1.75	1.48
1995	1.57	1.65	1.60	1.25	0.63	2.70	1.54	1.80	1.55
Production				*Million tons*					
1992	46.2	27.0	13.9	11.2	1.5	2.1	55.8	0.5	102.4
1993	43.5	26.6	9.2	11.5	1.1	2.4	50.9	0.5	94.8
1994	32.1	27.1	6.0	10.8	0.5	0.9	45.3	0.4	77.7
1995	36.0	25.5	4.8	10.0	0.5	2.7	43.5	0.5	80.0
UKRAINE									
Area				*Million hectares*					
1992	6.3	3.5	0.5	0.5	0.2	1.2	5.8	0.02	12.2
1993	5.7	4.2	0.5	0.5	0.2	1.3	6.8	0.02	12.5
1994	4.5	5.1	0.5	0.6	0.2	0.7	7.0	0.03	11.5
1995	5.0	4.7	0.5	0.5	0.2	1.2	7.1	0.03	12.1
Yield				*Tons per hectare*					
1992	3.08	2.93	2.32	2.52	1.09	2.46	2.68	2.50	2.89
1993	3.80	3.21	2.37	2.90	1.49	2.84	3.01	2.92	3.37
1994	3.07	2.85	1.98	2.30	0.88	2.36	2.65	2.80	2.81
1995	3.20	2.98	2.00	2.40	1.50	2.92	2.82	2.80	2.97
Production				*Million tons*					
1992	19.5	10.1	1.2	1.2	0.2	2.9	15.6	0.06	35.2
1993	21.8	13.6	1.2	1.5	0.3	3.8	20.3	0.07	42.2
1994	13.9	14.5	0.9	1.4	0.2	1.5	18.5	0.07	32.5
1995	16.0	14.0	1.0	1.2	0.3	3.5	20.0	0.07	36.1
KAZAKHSTAN									
Area				*Million hectares*					
1992	13.9	5.7	0.6	0.5	1.0	0.13	7.9	0.12	21.9
1993	12.8	7.0	0.6	0.5	0.5	0.12	8.8	0.11	21.7
1994	12.6	6.1	0.5	0.7	0.4	0.14	7.7	0.10	20.4
1995	12.6	5.1	0.3	0.5	0.4	0.18	6.4	0.10	19.1
Yield				*Tons per hectare*					
1992	1.32	1.49	0.08	1.59	0.45	2.92	1.33	2.51	1.33
1993	0.91	1.02	1.38	1.46	0.44	3.03	1.06	2.34	0.98
1994	0.72	0.84	1.00	1.38	0.37	1.70	0.89	1.80	0.79
1995	0.99	1.00	1.00	1.38	0.57	3.06	1.06	2.50	1.02
Production				*Million tons*					
1992	18.3	8.5	0.5	0.7	0.4	0.4	10.6	0.3	29.2
1993	11.6	7.1	0.8	0.8	0.2	0.4	9.4	0.3	21.2
1994	9.1	5.1	0.5	0.9	0.1	0.2	6.9	0.2	16.1
1995	12.5	5.1	0.3	0.7	0.2	0.6	6.8	0.3	19.6

[1] Official USDA data do not include buckwheat, pulses, misc.; 1994 is preliminary; 1995 is projected as of May 1995.
[2] Milled rice. Source: USDA.

conditions, and in years of high winterkill more area will be planted to spring barley.

FSU Grain Use Will Likely Continue To Decline, But at a Slower Rate

FSU 1995/96 total grain use was forecast by USDA in May 1995 at 158.8 million tons, slightly below last year's use, which was the lowest level in about 20 years. Grain for feed use is projected to fall, although at a slower rate than a year earlier, as contractions in livestock inventories may begin to slow down. More efficient grain use and relatively smaller crops have resulted in lower waste. Seed use has fallen as marginal areas have been cut back and higher seed costs induce planting efficiency. Industrial use in 1995/96 for alcohol is estimated slightly down, mainly due to reduced vodka and beer output (table 12). Lower demand for domestically produced alcoholic beverages mainly resulted from consumer preferences shifting toward competitively priced imports of alcoholic beverages. Grain for food use remains relatively unchanged, as higher per capita bread consumption in most FSU countries is offset by lower waste (table 13). Like bread, per capita consumption of potatoes has increased significantly as consumers have reduced their intake of meat. Stocks of grain are estimated largely unchanged from 1994/95's relatively low levels.

For the next 2 to 3 years, FSU grain use is likely to continue to contract. In the long term, however, feed use of grain is projected to increase, driven by growth in the FSU livestock sector. However, livestock inventories and feed use will likely remain below the high 1980's levels, as more efficient use of grain and protein meal should result in higher animal productivity. Food use of grains is likely to decline over time as meat consumption increases, while industrial use may increase as domestically produced alcoholic beverages are able to better compete with imports.

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Table 12--Output of food, feed, and industrial products from grain, Russian Federation [1]

Year	Flour	Pasta products	Bread & rolls	Groats	Mixed [2] feeds	Vodka	Beer	Starch
	Million tons					*Million decaliters*		*1,000 tons*
1980	23.2	0.92	19.9	2.39	32.5	208	331	130
1985	22.5	0.95	19.1	2.60	37.9	161	350	157
1990	20.7	1.04	18.2	2.85	41.0	138	336	179
1991	20.5	1.12	18.8	2.70	37.4	154	333	163
1992	20.4	1.10	16.8	2.01	27.4	152	279	154
1993	18.2	0.84	15.0	1.88	25.2	157	247	95
1994 [3]	15.8	0.67	12.3	1.30	14.6	122	207	na

na = Not available. [1] Output from all enterprises. [2] Output from State enterprises only. [3] Preliminary.
Source: Goskomstat Rossii.

Table 13--Annual per capita consumption of grain products and potatoes, FSU countries [1]

Country	Grain products [2]							Potatoes						
	1980	1985	1990	1991	1992	1993	1994 [3]	1980	1985	1990	1991	1992	1993	1994 [3]
	Kilograms													
Russian Fed.	126	119	119	120	125	124	124	118	109	106	112	118	127	125
Ukraine	146	138	141	143	143	145	144	133	139	131	116	133	150	140
Belarus	140	131	126	126	119	122	120	200	185	170	165	169	175	178
Moldova	177	173	171	175	170	173	170	75	79	69	69	67	80	70
Kazakhstan	147	146	146	147	153	180	180	86	89	85	75	86	80	70
Uzbekistan	177	177	170	167	164	149	161	29	26	29	25	27	28	25
Kyrgyzstan	149	144	139	134	135	135	134	56	65	69	62	68	58	56
Tajikistan	177	178	167	131	158	133	140	35	35	35	31	32	27	30
Turkmenistan	165	168	165	167	170	142	145	23	31	21	19	23	33	30
Armenia	140	134	129	130	114	110	110	55	65	58	77	64	73	73
Azerbaijan	160	158	151	134	150	150	153	25	28	27	22	26	25	25
Georgia	190	190	183	169	147	114	100	46	49	41	55	50	48	46
Lithuania	111	107	111	138	120	124	130	150	134	146	128	95	122	125
Latvia	107	104	107	105	110	111	na	128	122	125	115	116	119	na
Estonia	96	92	77	63	60	60	na	122	113	103	105	125	na	na
Total FSU	138	133	133	133	na	136	na	109	104	100	98	na	113	na

na = Not available. [1] On a calendar-year basis. [2] In flour equivalent; including pulses. [3] Estimates.
Sources: Statkom SNG; *Agrokhleb Biulleten'.*

Russian Meat Imports Surge as Consumption Outpaces Domestic Output

Total FSU livestock inventories and output are expected to continue to fall during the next 2-3 years, as producers face declining State support, worsening terms of trade, reduced consumer demand for their products, and increased competition from imports. Growth in private livestock holdings will continue to offset only part of the State sector's decline. In Russia, where production fell more than demand, competitively priced meat imports increased significantly in 1994. Long-term Russian meat imports are expected to decline as the domestic livestock sector increases productivity and responds to growing demand for meat. [Christian J. Foster]

FSU Livestock Sector Unlikely To Stabilize Before 1997

1994 marked the fifth consecutive year in the FSU of declining livestock product output, with estimated total meat, milk and egg production down by 36 percent, 23 percent, and 31 percent, respectively, from 1989's peak (table 14). The FSU's livestock sector is projected to continue to contract through 1997, with meat output beginning to stabilize at about 45 percent below 1989's level. In many Eastern and Central European countries, the decline in livestock sector output is already 30-40 percent below prereform levels, and the drop in output has not yet bottomed out.

Having slowed in 1993, the decline in overall FSU output of animal products accelerated in 1994. Producers in more FSU countries faced declining State support, worsening terms of trade, reduced consumer demand for livestock products, and increased competition from imports. Furthermore, reduced growth in private sector output last year offset less of the decline in State-sector output.

The sharpest declines in meat output took place in **Kazakhstan** and **Moldova**, where output fell by 20-30 percent in 1994 from the previous year. In **Russia, Ukraine** and **Belarus**, meat output decreased by an average 10 percent last year compared with 1993. **Russian** 1994 meat output, down 32 percent from its peak in 1990, was at its lowest level in 18 years. In the four Central Asian countries (**Uzbekistan, Turkmenistan, Tajikistan** and **Kyrgyzstan**), which continue to provide relatively larger subsidies to producers or have larger herds in private holdings, overall meat output declined by an aggregate of about 5 percent.

FSU livestock product output should begin to grow around 1998, when projected increases in real incomes in the region begin to raise demand for animal products. Other factors that could contribute to increases in livestock output are improved producers' terms of trade, increases in animal productivity, a more efficient marketing and processing infrastructure, more comprehensive and enforceable import tariffs, a stronger base of commercial private producers, and possibly more targeted, and therefore effective, subsidies to producers.

Aggregate FSU livestock inventories (in common animal units) as of January 1, 1995, were down nearly a quarter from their high in 1989, with the largest inventory declines in hogs (down almost 40 percent), sheep/goats (down a third), and cattle (down almost a quarter), and the least decline in cow inventories (down 7 percent) (table 15 and figure 5). The sharp reduction in sheep/goat numbers is the result of the unprofitable nature of wool production in the FSU countries, after reform cut subsidies. The even larger drop in hog inventories is due to the previous heavy concentration of hogs in large State-subsidized breeding complexes, which have received only minimal State support since reforms were enacted. Cow numbers have been least affected, as both former State farms and private producers have been able to graze animals, avoiding other more costly feeds.

Unlike the FSU as a whole, animal inventories in the four countries of **Central Asia** combined have remained largely unchanged during the last 3 years, although their composition has shifted dramatically. In **Uzbekistan**, for example, January 1, 1995, cattle numbers were up 7 percent from 1992, reflecting increased calls for self-sufficiency, more animal holdings in the private sector, and continued State support. Hog numbers, however, were down 50 percent, as feed costs have sharply increased and increased emphasis has been placed on the traditional Muslim diet.

While most FSU countries will continue to experience inventory drawdowns during 1995 similar to 1994, the decline in **Russia's** livestock inventories are expected to slow, as producers respond to the stabilization of demand for meat and dairy products which developed towards the end of last year. Another factor that may slow the contraction of Russian inventories is the ongoing change in herd makeup. Reportedly, the share of cows, sows, and ewes in total cattle, hog, and sheep numbers has risen significantly over the last 2 years, boding well for future inventory stabilization.

Growth in Private Sector Slows in Russia

Although animal holdings in the FSU's private sector (private farms and subsidiary plots) increased last year, the growth rate fell. Slower rising private inventories could therefore not offset as much of the drop in holdings on former State and collective farms as before. In **Russia**, for example, cattle inventories on former State and collective farms dropped 10 percent in 1993 from 1992 and were partly offset by the growth of private inventories (private plots and farms) by 5

Table 14--Production of livestock products, all farms, FSU and selected countries

Country/year	Total meat[1]	Milk	Eggs
	---1,000 tons---		*Million*
FSU			
1989	20,137	108,529	84,854
1990	20,011	108,384	81,725
1991	18,477	101,219	79,331
1992	16,031	90,613	70,672
1993 [2]	14,507	88,508	64,613
1994 [2]	12,967	83,731	58,560
Russian Federation			
1989	10,082	55,742	49,024
1990	10,112	55,715	47,470
1991	9,375	51,971	46,900
1992	8,261	47,236	42,902
1993	7,513	46,524	40,297
1994	6,861	42,811	37,392
Ukraine			
1989	4,430	24,377	17,393
1990	4,358	24,508	16,287
1991	4,029	22,409	15,188
1992	3,401	19,114	13,445
1993	2,920	18,148	11,800
1994	2,600	18,211	10,145
Kazakhstan			
1989	1,573	5,563	4,233
1990	1,548	5,642	4,185
1991	1,524	5,555	4,075
1992	1,258	5,265	3,565
1993	1,312	5,576	3,288
1994	1,047	5,217	2,802
Belarus			
1989	1,195	7,419	3,651
1990	1,181	7,457	3,657
1991	1,065	6,812	3,718
1992	950	5,885	3,502
1993	820	5,584	3,547
1994	740	5,560	3,400
Baltics			
1989	1,094	6,488	2,821
1990	1,058	6,258	2,639
1991	898	5,750	2,556
1992	769	4,643	2,002
1993	620	4,173	1,443
1994 [2]	500	3,800	1,350
Uzbekistan			
1989	478	2,929	2,429
1990	484	3,034	2,453
1991	492	3,331	2,347
1992	469	3,679	1,898
1993	517	3,764	1,788
1994	488	3,641	1,501

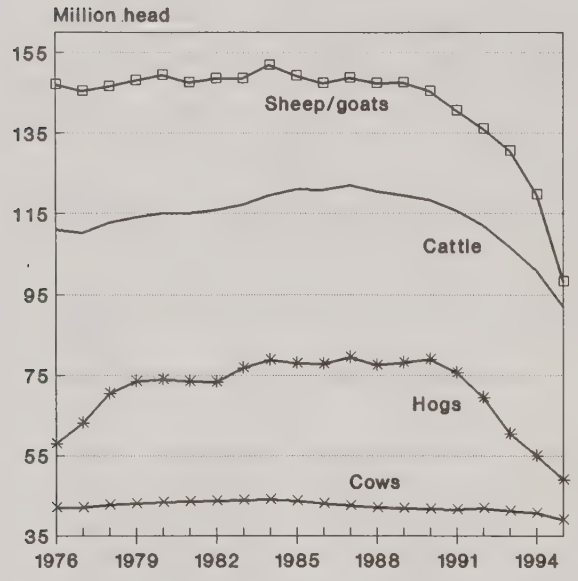
[1] Carcass weight, including fat. [2] Preliminary.
Sources: Statkom SNG; Goskomstat Rossii; USDA.

Table 15--January 1 livestock inventories and animal units from all farms, FSU and major countries

Country/year	Cattle		Hogs	Sheep & goats	Horses [1]	Poultry [1]	Total animal units [3]
	Total	Cows					
FSU	*Million head*						
1989	119.6	41.8	78.1	147.4	5.9	1,199.5	156.5
1990	118.4	41.7	79.0	145.4	5.9	1,213.9	156.1
1991	115.7	41.5	75.6	140.6	5.9	1,200.4	152.7
1992	112.1	41.8	69.4	136.2	5.9	1,183.1	148.0
1993	106.7	41.2	60.5	130.5	5.9	1,014.0	137.9
1994 [1]	100.9	40.7	55.0	119.7	6.0	994.0	131.2
1995 [3]	91.8	38.9	49.2	98.3	6.0	918.5	119.6
Russian Federation	*Million head*						
1989	59.3	20.8	39.8	62.7	2.6	646.0	77.6
1990	58.8	20.8	40.0	61.3	2.6	654.0	77.4
1991	57.0	20.5	38.3	58.2	2.6	660.0	75.5
1992	54.7	20.6	35.4	55.3	2.6	652.0	72.9
1993	52.2	20.2	31.5	51.4	2.6	568.0	68.0
1994	48.9	19.8	28.6	43.7	2.6	567.0	64.2
1995	43.9	18.6	25.2	35.9	2.6	508.0	57.7
Ukraine	*1,000 head*						
1989	25,621	8,567	19,471	9,243	782	254,500	31,437
1990	25,195	8,528	19,947	9,003	754	255,100	31,269
1991	24,623	8,378	19,427	8,419	738	246,104	30,455
1992	23,728	8,263	17,839	7,829	710	243,121	29,249
1993	22,457	8,057	16,175	7,237	700	214,582	27,265
1994	21,622	8,076	15,262	6,841	700	205,000	26,266
1995	19,630	7,813	13,926	5,570	700	195,000	24,238
Kazakhstan	*1,000 head*						
1989	9,752	3,273	3,188	36,498	1,581	58,400	14,516
1990	9,818	3,327	3,264	36,223	1,619	59,300	14,628
1991	9,756	3,367	3,224	35,700	1,626	59,900	14,562
1992	9,592	3,490	2,976	34,556	1,666	59,932	14,364
1993	9,576	3,623	2,591	34,420	1,704	54,031	14,199
1994	9,347	3,687	2,445	34,208	1,777	52,600	14,066
1995	8,062	3,387	1,982	24,955	1,800	50,000	12,082
Belarus	*1,000 head*						
1989	7,271	2,481	5,134	600	223	47,471	8,128
1990	7,166	2,439	5,204	500	219	49,768	8,101
1991	6,975	2,362	5,051	400	217	50,600	7,914
1992	6,577	2,314	4,703	424	215	51,700	7,574
1993	6,221	2,220	4,308	381	210	48,900	7,139
1994	5,850	2,199	4,175	319	205	47,300	6,825
1995	5,404	2,181	4,003	284	205	46,000	6,469

[1] Preliminary; poultry estimated 1994–95. [2] In terms of cows. Conversion ratio as follows: Cattle (other than cows) 0.6; hogs 0.3; sheep and goats 0.1; horses 1.0; poultry 0.02.
[3] Estimate.
Sources: Statkom SNG; Goskomstat Rossii; USDA.

Figure 5
Livestock Inventories, All Farms, FSU 1/



1/ January 1.
Source: Statkom SNG; USDA.

percent. However, in 1994, former State farm numbers fell by 14 percent, while private inventories grew only 2 percent.

The private sector has been unable to absorb a larger number of animals under present market conditions. A major impediment to the growth of private inventories has been the nature of animal husbandry in the private subsidiary plot sector. This part of the private sector accounts for the vast majority of private animal holdings, but engages in output primarily for subsistence rather than commercial purposes. In **Russia**, animals held on private plots in 1994 accounted for nearly a third of all hogs and cattle and close to 40 percent of all cows. However, private plot holders, which feed animals with household waste, grains from in-kind farm payments, or through grazing, face physical constraints and marketing problems that limit their activity to just a few animals each. They are not likely to expand significantly beyond current levels.

Another major obstacle to increased private sector holdings has been the unprofitable nature of livestock activities. In **Russia**, where nearly all livestock operations are reportedly unprofitable without State support, private farms maintain less than 2 percent of total cattle, cows, and hogs, typically about a dozen animals per farm. Private farmers to date have specialized instead in commercially profitable crops, such as grain and sunflowerseed. Over the longer term, as more sophisticated markets develop and demand for meat rises, economic incentives should motivate private farmers to improve animal husbandry practices and expand output.

Significant declines in **Russia** in the sale of young animals by former State and collective farms to private producers also accounted for last year's reduced growth of private sector holdings. Reportedly, former State farms sold private producers about 20 percent fewer piglets and about a third fewer chicks in 1994 compared to 1993.

Most State Agricultural Subsidies Go to Livestock Producers

Despite substantial State support, livestock operations remain the least profitable of FSU farm activities. With the possible exception of those of **Russia** and the four **Central Asian** States, livestock producers will likely continue to face deteriorating terms of trade, cuts in State subsidies, declines in consumer demand for meat, and competition from imports in 1995.

In **Russia,** livestock producers in 1994 again endured substantially larger increases in prices for inputs than for outputs. While meat prices on the whole rose by about 3 times, prices for mixed feeds increased about 4 times, for electricity 11 times, and for fuels 8 times. Given the unprofitable nature of nearly all livestock operations, the **Russian** Government has poured the bulk of State agricultural subsidies into this sector (table 16). During the last 2 years, roughly 85 percent of all farm subsidies have gone to livestock producers. Most subsidies have been disbursed directly to producers for output sold to former State processing plants, and a much smaller share provided for transportation of feeds and support of breeding stock. On average, 1994 Russian State subsidies to producers of meat (per unit of output) equaled nearly 20 percent of the sales price, for milk about 30 percent, and for eggs just under 10 percent. Rising meat and dairy prices in response to tightening supply and demand balances in the last quarter of 1994 may signal an end to the oversupply of meat and the declining prices paid to producers.

Output Per Animal Continues Decline

Despite significantly reduced animal feed supplies in 1994, even greater declines in inventories have resulted in increased feed per animal in many FSU countries. However, in most nations the rise in feed supplies per animal has not yet improved output per animal; on the contrary, in most cases physical productivity indicators continue to drop (table 17). A primary reason for the continued fall in output per animal is the sharply reduced use of costly mixed feeds, both domestically produced and imported. Other factors that likely account for reduced output per animal include improper culling of herds, whereby the more productive animals are slaughtered, and decreased attention to animal health.

In **Russia**, while forage area in 1994 was down 10 percent from 1991, and total feed supplies (in oat-unit equivalent) 21 percent below the 1991 level (December 1), feed per standard unit of animal in 1994 (December 1) was 17 percent above 1991's level. Nevertheless, milk per cow, eggs per layer, and weight gain per cattle all continued to decline in 1994 in Russia's State sector, down 21 percent, 7 percent, and 18 percent, respectively, compared with 1991. Milk per cow in 1994 fell 16 percent in **Azerbaijan**, 13 percent in **Kazakhstan** and **Kyrgyzstan**, and 2 percent in **Ukraine** compared with 1993. For the fourth consecutive year in **Russia**, animal slaughter weights fell, births per animal declined, deaths rates rose, and feed required per unit of output increased in 1994.

Table 16--Livestock sector, financial indicators, Russian Federation

Item	1985	1990	1991	1992	1993	1994
Cost of production [1]			*Rubles*			
Per centner of cattle wgt. gain	290	344	590	5,306	49,592	210,340
Per centner of hog wgt. gain	223	261	492	5,938	55,321	243,480
Per centner of poultry wgt. gain	162	163	331	4,867	47,104	194,426
Per 1,000 eggs	63	70	130	1,947	17,787	75,079
Per centner of milk	39	42	71	668	5,967	25,548
Procurement price per centner [2]						
Cattle	na	372	508	2,450	34,173	93,218
Hog	na	311	450	3,361	52,842	153,469
Poultry	na	253	na	na	53,336	172,333
Eggs (1,000)	na	108	228	1,953	25,110	88,208
Milk	na	65	82	574	6,482	20,197
Profitability [2, 3]			*Percent*			
Cattle production	4.4	21.9	23.2	57.1	63.6	-33
Swine production	4.1	23.1	14.5	36.8	52.4	-15
Poultry production	20.5	28.7	21.7	7.4	14.0	-9
Eggs	59.2	51.1	74.1	29.5	37.1	14
Milk	20.9	56.2	16.7	30.8	7.8	-20

na = Not available.
[1] The prime cost of production (sebestoimost') per centner of weight gain in the State sector.
[2] Data include State subsidies.
[3] The Russian term for profitability (rentabil'nost') equals sales revenue from marketed output minus prime cost divided by the latter.
Sources: Goskomstat Rossii; Russian Ministry of Agriculture and Food.

Table 17--Livestock productivity and feed conversion indicators, Russian Federation

Item	1980	1985	1990	1991	1992	1993	1994 [1]
Eggs per layer, State sector	210	224	236	231	224	221	214
Milk per cow (kg)	2,169	2,334	2,731	2,567	2,332	2,328	2,195
State sector only	2,122	2,327	2,781	2,569	2,247	2,249	2,029
Annual weight gain per cattle (kg)	99	105	121	112	102	100	na
State sector only	89	97	108	97	83	82	80
Annual weight gain per swine (kg)	97	101	118	111	102	103	na
State sector only	73	80	84	73	61	61	na
Feed use per centner of wgt. gain, cattle, State sector, centner of feed units	12.9	13.1	13.5	14.8	15.7	16.6	na
Feed use per centner of wgt. gain, swine, State sector, centner of feed units	9	8.5	8.3	9.4	10.3	11.0	na
Births per 100 cows, State sector, number of calves	77	79	82	79	78	75	72
Births per 100 swine, State sector, number of piglets	1,194	1,270	1,370	1,271	1,158	1,096	995
Mortality rates, as percent of herd, cattle, State sector	3.9	3.4	3.0	3.5	4.2	4.9	6.0
Mortality rates, as percent of herd, swine, State sector	7.3	6.8	6.9	8.3	10.7	11.9	15.1

na = Not available. [1] Preliminary.
Sources: Goskomstat Rossii; Russian Ministry of Agriculture and Food.

Reflecting the drop in demand for processed feeds in **Russia**, mixed feed (kombikorm) output in 1994 by former State enterprises fell to about 15 million tons, down over 60 percent from 41 million produced in 1990. In the place of mixed feeds, poorer quality feeds, improperly balanced with proteins and other supplements, are being used. Pasturing of animals remains underused.

Although animal productivity (milk output per cow, weight gain per animal) in the private sector in **Russia** remains higher than in the State sector, private producers have achieved only slight improvements in output per animal.

Growing Share of Livestock Products Marketed Outside State Channels

The share of meat and dairy products marketed through private channels continued to grow in 1994. Producers often sought to market produce on their own, barter their output, or pay farm workers in-kind rather than sell to State or former State meat-processing plants (kombinats), which were viewed as offering unacceptable prices or as too slow in making payments. Sales through non-State channels increased most in **Kazakhstan, Moldova**, and **Kyrgyzstan**. In **Tajikistan, Turkmenistan, Uzbekistan**, and **Ukraine,** State or quasi-State kombinats remained the dominant buyer of livestock products.

In **Russia**, although only about 30 percent of meat is reported as officially marketed through "private channels," the other 70 percent is not truly State controlled. The large former State kombinats, which officially remain classified as State procurement agencies, are generally self-financing and are forced to a large degree to compete on both the input and output markets. One of the challenges confronting meat kombinats is to independently obtain raw materials for processing. Processors have had to learn to deal with small-scale private producers that are less integrated into the existing market infrastructure.

Russian Meat Imports Surge as Producers Lag Behind Consumption Changes

According to official **Russian** trade data, meat imports in Russia, unlike in most other FSU countries, jumped sharply in 1994, but remained below 1990-91 levels. Russian meat imports in 1995 are expected to remain near last year's higher level. Nonetheless, it is estimated that imports will decline over the medium term as efficiencies in the livestock sector improve and domestic output increasingly adjusts to changes in consumer demand (tables 18 and 19). As other FSU countries make adjustments similar to Russia's, their imports might also temporarily rise.

Total meat imports were about 1.5 million tons in 1990 and 1991, according to official **Russian** data. Around 500,000 tons were imported from other FSU countries and about 1 million tons from outside the FSU. Total imports reportedly declined by half between 1991 and 1992, due to dramatically reduced consumer demand for meat, cuts in import subsidies, financial constraints, and disruptions in intra-FSU trade. But in 1994, as consumption showed signs of stabilization or slight growth in the face of continued contractions in livestock output, meat imports (primarily poultry meat) reportedly

Table 18--Annual per capita consumption of selected food products, FSU countries

Country	Meat & meat products [1]					Milk & milk products [2]						Eggs					
	1990	1991	1992	1993	1994 [3]	1985	1990	1991	1992	1993	1994 [3]	1985	1990	1991	1992	1993	1994 [3]
	Kilograms/capita											*Number*					
Russian Fed.	75	69	60	59	58	344	386	347	281	294	294	299	297	288	263	250	245
Ukraine	68	66	53.	46	42	350	373	346	285	264	258	276	272	256	212	206	177
Belarus	75	73	72	70	64	399	425	415	396	384	378	315	323	320	305	306	303
Moldova	58	56	46	35	29	294	303	259	198	174	154	209	203	195	166	130	100
Kazakhstan	71	71	61	59	47	260	307	303	269	260	253	217	222	206	175	170	164
Uzbekistan	32	30	27	27	25	180	210	196	175	177	168	107	120	107	67	74	68
Kyrgyzstan	54	48	46	44	42	182	266	249	206	193	185	124	154	144	117	81	45
Tajikistan	26	21	18	14	15	152	161	124	127	136	134	104	111	82	57	23	12
Turkmenistan	43	38	38	33	30	168	207	176	185	196	190	92	98	82	72	75	75
Armenia	44	31	20	20	21	433	446	392	122	99	99	148	163	143	65	45	43
Azerbaijan	32	26	20	17	16	293	292	250	204	182	na	155	143	116	na	70	62
Georgia	42	31	21	19	18	309	289	135	87	80	78	148	140	139	na	46	46
Lithuania	60	66	65	56	48	409	480	315	334	319	275	285	305	293	207	143	155
Latvia	77	69	54	50	na	455	454	420	370	355	na	295	259	232	213	210	na
Estonia	75	63	55	44	na	489	487	409	350	325	na	296	289	260	na	197	na
Total FSU	59	62	na	50	47	325	358	319	na	263	259	260	258	245	na	203	192

na = Not available. [1] Includes offals and edible fat. [2] Includes milk equivalent of butter. [3] Preliminary; Statkom SNG.
Sources: Statkom SNG; Goskomstat Rossii.

surged to around 1 million tons. **Russian** per capita consumption of meat and dairy products reportedly stabilized in 1994, down 20 percent and 24 percent, respectively, from 1990.

While livestock producers lagged in their adjustment to consumption changes, the real appreciation of the ruble in 1994 meant that the prices for imported foods dropped relative to domestic prices. This in turn bolstered demand for Western imports, which were often competitively priced, higher quality, better packaged, and more convenient to prepare. Trade liberalization also contributed to increased demand for imports as an expanding network of private traders, more responsive to newly released consumer demands and preferences and often prepared to make cash purchases, became increasingly active. The creation of a nouveau riche class of consumers in Russia contributed to increased import demand as well.

In response to the dramatic rise in imports, a number of import tariffs on meat products were implemented in mid-1994 to protect domestic producers from foreign competition. Tariffs on meat products (except for poultry, which were increased) were lowered later in 1994 due to pressure from major urban importers and from free trade advocates, but may be raised again during the first-half of 1995.

U.S. poultry exports benefitted tremendously from the shifting trends in **Russia** last year. Given reported recovery in the demand for meat in Russia, and the very competitive price of high-quality U.S. dark-meat poultry parts, U.S. poultry exports to Russia rose from just over a 100,000 tons in 1993 to nearly 400,000 tons, worth over $300 million, in 1994. The cheap price of poultry meat relative to other meats also proved advantageous for U.S. exporters. While U.S. sales to Russia may be sustained at this level in the near term, exports are expected to decline over the longer term as domestic producers increase output.

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Table 19--Net imports of meat and meat products, FSU countries [1]

Country	1991			1992			1993			1994		
	Intra-FSU	Extra-FSU	Total net import	Intra-FSU	Extra-FSU	Total net import	Intra-FSU	Extra-FSU	Total net import	Intra-FSU	Extra-FSU	Total net import
	Tons											
Russian Fed.	546,463	918,700	1,465,163	238,600	463,794	702,394	191,717	159,000	350,717	198,000	797,700	995,700
Ukraine	(219,896)	3,010	(216,886)	(186,200)	na	(186,200)	(98,624)	na	na	(129,700)	na	na
Belarus	(163,752)	(931)	(164,683)	(93,100)	(9,220)	(102,320)	(64,562)	na	na	(53,400)	na	na
Moldova	(29,685)	0	(29,685)	(27,600)	0	(27,600)	(22,561)	na	na	(16,200)	na	na
Kazakhstan	(134,331)	6,496	(127,835)	(55,600)	11,894	(43,706)	(61,302)	na	na	(18,300)	na	na
Uzbekistan	78,421	68,885	147,306	51,400	29,797	81,197	24,301	na	na	10,500	na	na
Kyrgyzstan	1,828	0	1,828	(2,800)	(5)	(2,805)	(5,896)	na	na	(2,500)	na	na
Tajikistan	5,411	12,808	18,219	3,400	0	3,400	4,612	na	na	200	na	na
Turkmenistan	18,901	22,200	41,101	29,500	35,096	64,596	19,778	na	na	4,300	na	na
Armenia	4,406	0	4,406	5,300	na	na	218	na	na	100	na	na
Azerbaijan	22,877	25,243	48,120	30,300	na	na	11,164	na	na	7,000	na	na
Georgia	5079	0	5,079	6,600	na	na	500	na	na	na	na	na
Lithuania	(82,492)	0	(82,492)	30	na	na	na	na	na	na	na	na
Latvia	(31,132)	0	(31,132)	na	na	na	na	na	na	na	na	na
Estonia	(22,275)	0	(22,275)	na	na	na	na	na	na	na	na	na
Total FSU	--	--	1,056,234	--	--	na	--	--	na	--	--	na

na = Not available. (-) = export. -- = Not applicable.
[1] On calendar year basis. Includes beef, pork and poultry.
Sources: Goskomstat SSSR; Statkom SNG; Goskomstat Rossii.

FSU Oilseed Sector Begins Responding to Market Forces

FSU sunflowerseed area continues on an upswing while yields decline, suggesting a shift to a less resource-intensive agriculture. Sunflowerseed exports surged in 1994 but could fall if the governments reimpose export controls. Volume traded in the protein meal market remains small, because the livestock sector is still in retreat. Although vegetable oil consumption has declined, demand is outstripping supply, thus raising prices. [Jaclyn Shend and Roger Hoskin]

Plantings to sunflowerseed, the major oilseed in the FSU region, have increased since 1991 and should continue to do so. While there has been a slight decline in soybean area, an unchanging forecast for cottonseed plantings combined with likely improved yields for all oilseeds should lead to increased aggregate oilseed output by the end of the decade.

Meanwhile, until domestic production can respond, demand will likely continue to exceed domestic supplies, despite declining per capita consumption of vegetable oils. This is likely to result in high prices and increased vegetable oil imports. Continued contraction of the livestock sector will limit demand for high protein meals in the near term. Over the longer term, recovery in the FSU oilseeds sector could reduce the region's need for extra-FSU imports of both vegetable oils and protein meals.

FSU Sunflowerseed Area Expands, While Yields Drop

Total FSU oilseed production in 1994/95 fell, as lower yields offset expansion in area (table 20). In the medium to long term (5 to 10 years), as the FSU oilseed industry restructures, yields will likely improve for all major oilseeds. Although soybean and cottonseed plantings are expected to change little, rising sunflowerseed area could push total FSU oilseed plantings above 9 million hectares by the decade's end.

FSU area planted to sunflowerseed in 1994 increased substantially, reaching 5.2 million hectares after averaging 4.2 million hectares from 1986 to 1990. The largest growth in area was in **Russia,** where the 1994 plantings were 3.1 million hectares, more than 20 percent above 1991. Sunflowers continue to be one of the most profitable crops to produce. For 1994, the profit-to-cost ratio for sunflowers was 1.25, compared with 0.47 for grain (table 21). Furthermore, foreign companies contracted for 1994 sunflowerseed exports prior to planting, which also created an incentive for farmers to grow sunflowerseeds.

FSU sunflowerseed yields, however, have sharply fallen. Yields in 1994 were 20 percent below 1993 low levels, largely because of drought in the main FSU sunflowerseed regions and lower input use. Mineral fertilizer application in **Russia** fell to less than 10 kilograms per hectare for sunflowerseed in 1994, compared with over 90 kilograms per hectare in 1988, a rate which may have been excessive. Reduced use of mineral fertilizer, however, is not irrational given conditions in most FSU countries. Abundant labor and land are being substituted for expensive fertilizers, chemicals, and deteriorating machinery. The result is a shift from "intensive" to a more "extensive" agriculture.

High Prices Contain Vegetable Oil Consumption

FSU vegetable oil consumption is well below that in Western countries because animal fats are still the major source of dietary fats. Per capita vegetable oil consumption in 1994 was about 6 kilograms in **Russia**, compared with over 20 kilograms in United States. Consumption of vegetable oils in 1994 fell substantially below prereform levels in most FSU countries, as prices continue to increase rapidly. Domestic **Russian** vegetable oil prices are high and continuing to rise. In November 1994, prices for crude sunflowerseed oil in Krasnodar, Russia's main sunflowerseed growing region, were about $615 a ton, above prices for the same period in Rotterdam.

As market reforms are successfully implemented and the oilseed sector restructures, consumption by the year 2000 could exceed prereform levels. (FSU annual average per capita vegetable oil consumption during 1986-90 was about 10 kilograms). Consumption patterns will likely begin to shift from animal fats to vegetable oils, as has happened in other reforming East European countries. For the near term, however, vegetable oil consumption will be limited by high prices and lower consumer purchasing power compared with the Soviet period.

Trade volumes in oilseed meals, either imported or domestic, remain small. The retrenchment in the livestock sector has curtailed the feeding of protein supplements, even though FSU sunflowerseed meal prices are lower than world prices. While a rebound in livestock profitability would boost demand for protein meals, the meal market is not a significant factor in the sunflowerseed outlook.

In the Longer Term, Higher Prices Could Spur FSU Oilseed Industry Reform

Since the major FSU oilseeds (sunflowerseed, cottonseed, and rapeseed) are high oil content seeds, the oil is the most valuable component and its extraction is the primary incentive to crush. This "crush for oil" is in contrast to the United States, where soybeans are crushed primarily for the meal, usually the largest value component. A crush for oil will most likely be the norm in the FSU oilseed industry for the foreseeable future. Meal supplies will be linked to the demand for oil and could be largely independent of meal demand.

Table 20--FSU balance for major oilseeds and totals, 1987/88-1994/95 [1]

Item	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
				1,000 tons				
TOTAL OILSEEDS [2]								
Production	11,627	12,486	13,536	12,607	11,201	10,350	10,054	8,915
MY Imports	1,550	724	717	530	685	176	360	295
MY Exports	0	97	171	240	336	410	420	770
SUNFLOWERSEED								
Production	6,114	6,158	7,064	6,554	5,638	5,687	5,297	4,490
MY Imports	3	0	0	0	0	0	0	0
MY Exports	0	25	142	210	336	410	420	770
SOYBEANS								
Production	725	886	957	880	811	634	647	495
MY Imports	1,420	660	661	475	630	166	350	285
MY Exports	0	0	0	0	0	0	0	0
COTTONSEED								
Production	4,490	5,020	5,106	4,763	4,435	3,698	3,829	3,660
MY Imports	2	0	0	0	0	0	0	0
MY Exports	0	45	0	0	0	0	0	0
TOTAL OILMEAL [2]								
Production	5,949	5,746	6,095	5,606	5,258	4,183	4,202	3,647
MY Imports	4,259	5,450	3,960	4,324	4,671	2,446	2,306	2,369
MY Exports	1,259	1,478	1,401	1,313	1,272	1,037	1,085	1,032
Consumption	8,949	9,718	8,654	8,617	8,657	5,592	5,423	4,984
SUNFLOWERSEED MEAL								
Production	1,732	1,751	1,961	1,820	1,502	1,492	1,333	956
MY Imports	219	215	77	105	137	231	119	250
MY Exports	204	226	50	65	73	0	0	0
Consumption	1,747	1,740	1,988	1,860	1,566	1,723	1,452	1,206
SOYBEAN MEAL								
Production	1,546	1,093	1,145	890	1,027	542	716	558
MY Imports	2,930	3,950	2,526	2,968	3,341	1,288	1,256	1,310
MY Exports	0	0	0	0	0	0	0	0
Consumption	4,476	5,043	3,671	3,858	4,368	1,830	1,972	1,868
COTTONSEED MEAL								
Production	1,715	1,923	2,003	1,922	1,807	1,475	1,509	1,497
MY Imports	1,045	1,245	1,331	1,236	1,178	917	923	798
MY Exports	1,043	1,231	1,331	1,234	1,178	994	1,042	989
Consumption	1,717	1,937	2,003	1,924	1,807	1,398	1,390	1,306
TOTAL VEGETABLE OIL [2]								
Production	2,695	3,052	3,293	3,081	2,676	2,446	2,294	1,803
MY Imports	1,142	1,799	1,462	982	1,307	939	785	904
MY Exports	722	807	726	635	558	402	264	232
Consumption	3,468	4,039	4,026	3,432	3,423	2,984	2,814	2,483
SUNFLOWERSEED OIL								
Production	2,007	2,024	2,270	2,109	1,742	1,730	1,545	1,119
MY Imports	585	765	654	347	469	275	293	381
MY Exports	478	544	451	341	303	192	64	40
Consumption	2,112	2,240	2,470	2,119	1,906	1,814	1,773	1,468
SOYBEAN OIL								
Production	344	243	255	199	228	121	160	122
MY Imports	80	187	179	175	240	240	190	210
MY Exports	0	0	0	0	0	0	0	0
Consumption	424	430	434	374	468	361	350	332
COTTONSEED OIL								
Production	591	662	649	660	622	507	518	515
MY Imports	244	263	275	294	255	209	212	192
MY Exports	244	263	275	294	255	210	200	192
Consumption	591	662	649	660	622	506	530	515

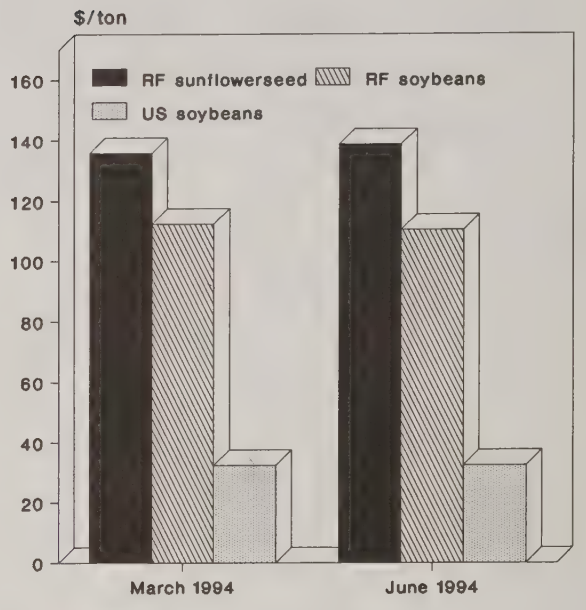
[1] October/September marketing year (MY). [2] Totals may include other seeds, meal and oils. Source: USDA.

Table 21--Production cost and profitability of selected crops, Russian Federation

Item	1980	1985	1990	1991	1992	1993	1994 [1]
Production cost [2]			*Rubles per centner*				
Grain	8.3	10.6	12.1	20.8	191	1,600	8,431
Sunflowerseed	9.9	11.4	15.6	25	305	2,545	14,638
Sugarbeets	4.2	4.3	4.6	7.7	102	913	5,119
Potato	13.9	19.1	24.4	41.3	313	2,772	19,143
Vegetables	11.3	12.8	16.7	37.3	393	4,350	25,900
Profitability [3]			*Percent*				
Grain	35.1	49.4	158.2	103.7	304.8	190	47
Sunflowerseed	88.8	119.3	144.6	231.4	381.0	217	125
Sugarbeets	-19.1	42.6	26.3	-1.8	95.0	109	19
Potato	-7.1	6.5	24.4	120.0	149.7	102	43
Vegetables	12.9	16.5	41.5	97.4	98.8	118	51
Inflation rate	--	--	5.3	92.6	2,564	879	226

-- = Not applicable.
[1] Preliminary.
[2] Cost of production (*sebestoimost'*) in the State sector.
[3] Profitability (*rentabilnost'*) is the difference between revenue and prime cost of production, divided by the latter; including State subsidies.
Source: Goskomstat Rossii.

Figure 6
Oilseed Crush Margins, Russian Federation (RF) and U.S.



Russian prices in terms of U.S. dollars.
Source: Krest'ianskie vedomosti.

Given reported **Russian** prices, a cash margin between the value of the meal and oil and seed can be calculated at $140 a ton for sunflowerseed and $110 a ton for soybeans, compared with $32 for U.S. soybeans (figure 6). While the prices used are from a small market with few actual transactions, they provide a measure of the prices of FSU oilseeds compared with world oilseed prices. These margins suggest a strong incentive in **Russia**, and probably **Ukraine** as well, to explore expanding the processing industry.

FSU oilseed plants are operating well below stated capacity. However, it is difficult to measure the capacity of FSU oilseed mills because most of these plants are in poor operating condition. As a result, actual operating capacities may be well below the potential if plants were in good condition.

In **Russia,** crushers pay sunflowerseed growers in products, oil, or meal for seeds. This practice reflects the lack of liquidity in the agricultural sector and underdeveloped marketing channels. The prospect of further State subsidies to processors, high taxes, and government restrictions on foreign capital are obstacles to investment in the processing sector.

Reduced Trade Barriers Stimulate Russian Sunflowerseed Exports

The removal of most government restrictions on sunflowerseed exports has exposed **Russian** producers to world prices, causing domestic market prices for sunflowerseeds to substantially exceed State recommended prices. In late October, prices offered by the State were about $140 a ton, while private exporters were offering $200 to $220 a ton. Consequently, 1994 exports increased, with about 1.2 million tons registered compared with 0.8 million in 1993. At the same time, State procurements fell to less than 10 percent of production compared with over 80 percent in 1990. Turkey and Western Europe have been some of the major foreign buyers. Russian sunflowerseeds were also exported to **Ukraine** and the oil reimported to Russia. Exports of sunflowerseeds, however, were prohibited in Ukraine during 1994.

The longer term outlook depends on policy formulation by the **Russian** Government. If it imposes export quotas and taxes, domestic supplies would immediately increase, lowering acquisition prices for crushers. However, it could lower profitability of oilseed production and hence area planted in subsequent seasons--leaving Russia and other oilseed-producing FSU countries dependent on imports and the domestic sector reliant on subsidies. Despite profitable crushing margins, continued subsidies to the processing sector could inhibit investment.

Vegetable Oil Imports May Rise as Russian Prices Remain High

FSU vegetable oil imports in 1994/95 (October/September) are estimated at 0.9 million tons, about half the levels of the late 1980's, largely due to the inability to finance imports and reduced per capita consumption. However, in the near term (1 to 2 years), high prices for domestic oils will likely increase the demand for imported vegetable oils. Even with an optimistic scenario for FSU oilseed sector recovery, the FSU region will probably remain a net importer of vegetable oil. Most FSU countries, except **Ukraine**, **Moldova**, **Uzbekistan**,

and **Turkmenistan**, are net importers of vegetable oil. Continued reform and recovery in the main FSU oilseed-producing countries could help fill the gap, but extra-FSU imports of vegetable oil would still probably be needed.

In 1994/95, FSU soybean and soybean meal imports remained substantially below the high levels of the late 1980's at 285,000 tons and 1.3 million tons, respectively. The United States continues to maintain about a 40-percent market share in FSU soybean meal imports, but less than 10 percent of total soybean imports. Brazil, however, accounted for over 50 percent of FSU soybean imports in the last 2 years. Over the long term, as the FSU livestock sector begins to rebound, soybean and soybean product imports may increase, although higher output and substitution of domestic oilseed meal will have a dampening effect.

In a reformed FSU sunflowerseed sector, supplies of sunflowerseed meal could rise independently of demand from the livestock sector; sunflower is mainly crushed for its oil, with protein meal resulting as a joint product. Increased supplies could lead to substantial price discounts of sunflowerseed meal relative to imported meal. Over the next several years, demand forecasts for imported soybean meal must take into account not only recovery in the FSU livestock sector but also domestic supplies of competing oilseed meals. Sunflowerseed, cottonseed, and rapeseed meals are viable feeds, within limits, for most classes of livestock.

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Sugar Production and Consumption Contract While Prices Climb

FSU sugar consumption is continuing a decline begun several years ago. However, total consumption of sugar may not have fallen as much as available data indicate. Consumers, mostly in Russia, now buy imported finished products. The domestic industry continues in retreat as both area and yield decline. High prices for inputs compared with sugarbeet prices have made this one of the least profitable crops. The FSU will continue to be a net importer, with barter from Cuba and hard currency purchases from the EU providing most supplies. Removal of Russian State procurement prices in 1994 and higher 1995 prices could improve the outlook for 1995 plantings if price signals are allowed to filter back to the farm gate. Even if yields recover from weather induced lows, the Russian processing industry is unprepared to meet even reduced domestic demands. Investment, either government or private, is necessary if the industry is expected to meet even reduced demand. [Roger Hoskin and Yuri Markish]

The FSU region is expected to remain a net sugar importer for the foreseeable future. **Russia** is a major producer but cannot meet its own needs. **Ukraine** will remain the major exporter in the region, although total exports are projected to decline. Total FSU sugar production is expected to climb above 8 million tons by the end of the decade. The rise is predicated on a forecast economic recovery in the region later in the decade. However, production is not expected to climb above prereform levels and despite recent declines, consumption in the region will continue to exceed supplies.

Although FSU sugar consumption has fallen, lower extra-FSU imports and domestic production have lead to sharply higher prices. In 1994, lower plantings combined with bad weather and falling input use resulted in the worst FSU sugarbeet crop in 35 years. Consumption declines are a result of changing consumption patterns and sharply higher prices. The industries in both **Russia** and **Ukraine** are beset by a host of technical problems made worse by the unfavorable costs and returns in the sector.

Higher Prices and Changing Consumption Patterns Reduce Demand

Current estimates place total FSU sugar consumption at slightly under 10 million tons, continuing a decline begun in 1988/89 (September/August) (table 22). **Russia** and **Ukraine**, the region's major producers and consumers, will consume about 5 and 2 million tons of sugar, respectively. **Russian** consumption could fall to near 4 million tons in the future. Higher prices, elimination of consumer subsidies, and imports of finished products have dampened demand for domestic sugar.

Table 22--Sugar balances, selected FSU countries, 1992/93–1994/95 [1]

Country/ year	Sugarbeet area	Sugarbeet yield	Sugarbeet output	Beginning stocks	Sugar prod. from beets	Total imports (raw+white)	Domestic sugar supply	Total exports	Domestic consump- tion	Ending stocks
	1,000 ha	*Tons/ha*	*1,000 tons*							
Russian Federation										
1992/93	1,439	17.8	25,548	990	2,540	3,500	7,030	80	5,800	1,150
1993/94	1,333	19.1	25,468	1,150	2,700	3,150	7,000	40	5,400	1,560
1994/95	1,104	12.6	13,900	1,560	1,680	2,700	5,940	30	4,900	1,010
Ukraine										
1992/93	1,485	19.4	28,783	813	3,965	430	5,208	2,000	2,500	708
1993/94	1,519	22.2	33,717	708	4,190	32	4,930	1,800	2,400	730
1994/95	1,400	19.7	27,600	730	3,600	100	4,430	1,700	2,300	430
Other										
1992/93	251	21.5	5,391	504	555	2,181	3,240	0	2,833	407
1993/94	251	24.2	6,070	407	567	2,150	3,124	0	2,665	459
1994/95	247	17.5	4,316	459	391	2,001	2,851	0	2,530	321
Total FSU										
1992/93	3,175	18.8	59,722	2,307	7,060	6,111	15,478	2,080	11,133	2,265
1993/94	3,103	21.0	65,255	2,265	7,457	5,332	15,054	1,840	10,465	2,749
1994/95	2,751	16.7	45,816	2,749	5,671	4,801	13,221	1,730	9,730	1,761

[1] Estimates, 1994/95 preliminary, except area, yield, and output for sugarbeets are official. All data are in raw value, except area, yield, and output for sugarbeets. Source: USDA.

A modest recovery in production coupled with lowered consumption could limit the large extra-FSU sugar imports of the late 1980's and early 1990's to the 3 million-ton range by the decade's end. But this will depend on genuine reform in the domestic industry.

Since reforms began, consumption patterns for sugar and sugar products in the FSU countries have changed. Traditionally, per capita sugar consumption in the FSU has been higher than sugar consumption in either the United States or Western Europe. Use for home canning and alcoholic beverage making account for more than half of sugar use. This use has declined in recent years in line with poor fruit and berry harvests and rising imports of spirits. Furthermore, consumption of imported sugar-containing products has helped maintain consumption as the domestic industry contracted. Russian production of confectionery items was 1.5 million tons in 1994, down 13 percent from 1993 and barely more than one-half of 1990's output.

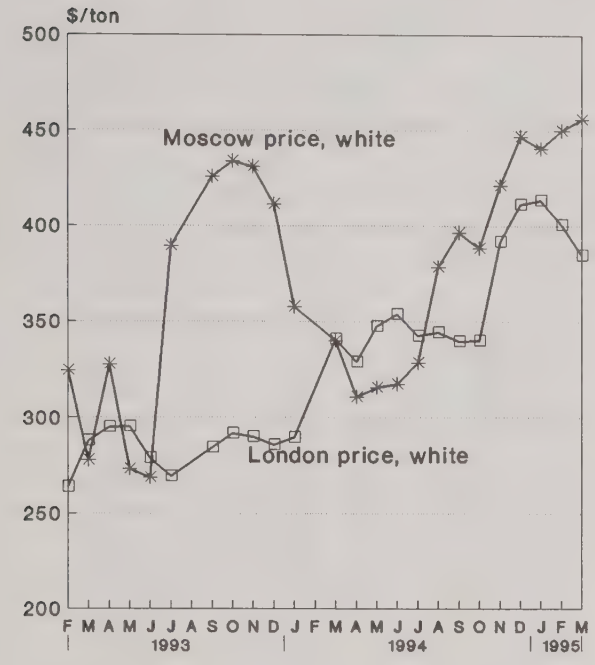
Because Other Crops Are More Profitable, Sugar Plantings Drop

In recent years, area planted to sugarbeets has declined because of poor profitability for this input-intensive crop. Based on 1994 estimates, **Russian** producers spend less than do western counterparts on just about all input categories. Inputs of fertilizers and crop protection products have declined by over 80 percent since 1990. Promised government subsidies have been often late in arriving. Consequently, returns from sugar production are below those of other crops. For 1994, the profit- to-cost ratio for sugarbeets was estimated at 0.19 compared with 1.25 for sunflowerseeds and 0.47 for grain. Partly because of these drastic declines in input use in the last 3 years, yields have declined precipitously, which, together with a decline in plantings, have caused declines in sugarbeet output.

In May 1993, the **Russian** government removed the 40-percent subsidy on raw sugar, making refining unprofitable. Moscow prices of refined sugar surged above London prices (figure 7). Because of this, and in anticipation of an import tariff (a 20-percent tariff on refined was imposed in March 1994), imports pushed 1993/94 ending stocks to about 1.6 million tons. By March 1994, Moscow prices fell below London prices. By late spring, it became apparent that the 1994 sugarbeet crop would be small. In August 1994, Moscow prices again rose above world prices. By March 1995, **Russian** white sugar domestic prices were well above world levels ($450 a ton in Moscow compared with $385 a ton in London). Even with low **Russian** extraction rates, these prices imply a top bid price for sugarbeets near $50 a ton, compared with Ministry of Food and Agriculture reported prices of about $25 a ton. Actual farmgate prices were likely in between.

High domestic sugar prices are likely to prompt further imports in 1995. Barter trade with Cuba is the most likely source, but lack of Cuban and **Ukrainian** availabilities could lead to imports from Western Europe and South America. The 20-percent import tariff imposed by the **Russian** government in July 1994 on extra-FSU sources makes these imports more expensive.

Figure 7
Russian and World Sugar Prices



Sources: USDA; Kommersant.

Higher Russian Prices Could Stimulate Additional Output

Improvements in production and processing could have a high payoff. For example, an additional 1-percent improvement in the low FSU extraction rate would provide about 150,000 tons of additional sugar, worth about $70 million dollars at April 1995 Moscow wholesale prices. This could make incremental improvements in production and processing profitable and a readily available source of additional sugar in the FSU. Some improvements in production and processing can be made at a modest cost. A number of firms, both **Russian** and in joint venture with foreign companies, have recently shown interest in investing in the **Russian** processing sector.

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Cotton Exports Soar Despite Production Cuts

The collapse of Russia's textile industry and the need to earn hard currency have driven extra-FSU cotton exports to record levels in the mid-1990's and are likely to keep future exports high. After the United States, Uzbekistan and Turkmenistan in Central Asia are the world's second and third largest cotton exporters, respectively. Cotton output is expected to stabilize in Central Asian countries during the late 1990's, following a sharp downturn in the first half of the decade. With continued low domestic processing capacity, Central Asia is expected to remain primarily a supplier of cotton fiber, rather than finished products, to the world market. [Jay Mitchell and Yuri Markish]

Exports Shift to World Market

Central Asian governments in recent years have shifted the bulk of their cotton exports to outside the FSU region in response to a need for hard currency, a sharp collapse in FSU demand, and world market prices that are 4-7 times greater than domestic prices. Extra-FSU cotton exports nearly doubled from an average of less than 800,000 tons per year during 1987/88-1992/93 (August/July marketing years) to about 1.4 million tons in 1994/95 (figure 8). They are expected to continue at levels of 1-1.5 million tons per year during the late 1990's, as major FSU producing countries seek to earn hard-currency revenue and a growing world economy sustains demand.

Production Slow To Rebound

Total FSU lint cotton output declined to about 2 million tons in 1994/95, continuing a downward trend which began in 1989 (table 23). Over the past 6 years, FSU cotton lint production has contracted by more than one-quarter, as both area sown and yields have fallen. Yield declines have been due in large part to sharply reduced use of inputs, especially fertilizers and pesticides. USDA projects that fairly stable yields and area will keep FSU cotton output around 2 million tons during the late 1990's, well below its 1980's peaks.

FSU Consumption Could Rise After 2000

Demand for cotton in the FSU fell sharply during the early 1990's as a result of deep contractions in the textile industry throughout the FSU economies. Total FSU cotton lint consumption fell from around 2 million tons per year in the late

1980's to about 700,000 tons in 1994/95. FSU cotton consumption is expected to recover partially over the next decade from its sharp downturn of recent years as new processing and textile capacity is gradually built, much of it with Western technology or involving foreign investment. A greater share of FSU cotton textile capacity is likely to move southward into the cotton-producing areas of Central Asia, where foreign investors should find attractive opportunities based on abundant cotton supplies and rapidly growing populations that should supply both cheap labor and boost domestic demand.

State Reluctant To Relinquish Control to Market Forces

Recent policy developments reveal slow and uneven progress in FSU countries toward decentralization and marketization of cotton production, trade, and marketing. Domestic procurement prices have risen in recent years, but remain less than one-third of world market levels. The conservative nature of most governments in the region and their strong desire to retain control over the economy suggest that progress on decentralization and modernization of cotton production will be uneven. Temporary instances of backtracking on reform cannot be ruled out. Failure to raise domestic cotton prices toward world market levels could be a disincentive to cotton production in several Central Asian nations, restricting possible output gains for the rest of the 1990's.

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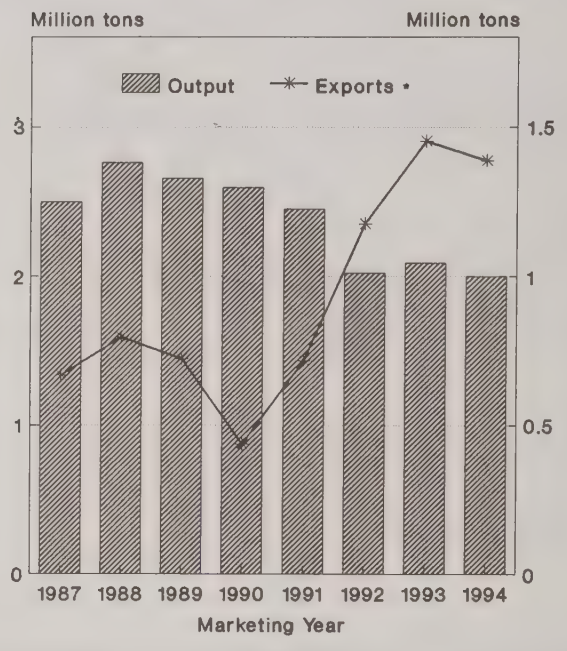
Figure 8
FSU Cotton Exports Soar Despite Production Cuts



Source: USDA. • Extra-FSU exports

Table 23--Cotton balances, selected FSU countries, 1992/93-1994/95 [1]

Country/ year	Beginning stocks	Seed-cotton area	Seed-cotton yield	Seed-cotton output	Ginning rate	Lint-cotton output	Lint-cotton imports	Lint-cotton supply	Lint-cotton exports	Domestic lint consumption	Ending stocks	Cotton cloth prod.[2]
	Mil. tons	*Mil. ha*	*Tons/ha*	*Million tons*							*Mil. tons*	*Mil. m²*
Russian Federation												
1992/93	0.036	0	0	0	0	0	0.577	0.613	0.098	0.479	0.036	3.292
1993/94	0.036	0	0	0	0	0	0.566	0.602	0.131	0.435	0.036	2.324
1994/95	0.036	0	0	0	0	0	0.435	0.471	0.131	0.283	0.057	1.500
Uzbekistan												
1992/93	0.500	1.67	2.48	4.128	0.32	1.306	0	1.806	1.197	0.207	0.402	na
1993/94	0.402	1.63	2.60	4.234	0.32	1.359	0	1.760	1.350	0.201	0.209	na
1994/95	0.209	1.50	2.65	3.977	0.32	1.273	0	1.482	1.154	0.196	0.132	na
Others												
1992/93	0.294	1.22	1.92	2.344	0.31	0.719	0.220	1.233	0.673	0.353	0.207	na
1993/94	0.208	1.19	2.00	2.381	0.31	0.735	0.145	1.088	0.681	0.248	0.159	na
1994/95	0.159	1.20	1.98	2.376	0.31	0.730	0.121	1.010	0.656	0.218	0.136	na
Total FSU												
1992/93	0.830	2.89	2.24	6.472	0.31	2.025	0.797	3.652	1.968	1.039	0.645	na
1993/94	0.645	2.82	2.35	6.615	0.32	2.093	0.711	3.450	2.162	0.884	0.404	na
1994/95	0.404	2.70	2.35	6.353	0.32	2.003	0.556	2.963	1.941	0.697	0.325	na

na = Not available. [1] Estimates, 1994/95 preliminary, except area, yield, and output for seed cotton are official.
[2] Cotton cloth production data are calendar year data.
Sources: USDA; Statkom SNG; Goskomstat Rossii; Minstat Ukrainy.

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